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ABSTRACT

Produced for use by educators and administrators in Scotland involved in planning and developing learning resources centers in elementary and secondary schools, this guide contains: (1) examples and discussion of the allocation of space for resources centers in schools with different architectural layouts, (2) three case studies of schools which already have resources centers, and (3) a consideration of the major questions which have to be addressed in setting up and managing a resources center. A set of eight floor layout diagrams illustrates various ways in which resources centers have been incorporated into new or existing educational facilities. Information contained in the three case studies includes descriptions of the schools, their resources centers and resources center staffs; accounts of the development of the resources centers, their operations, and future prospects; and lists of the equipment held by the resources centers. Appendices comprise an interview with two media resources officers on the role of the media specialist in the school, a recommendation for the establishment of a media resources center prepared by the Renfrewshire Education Department, an essay on the role of the librarian in the resources center, and set of questions relating to resources centers. (JL)

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THE SETTING UP OF A RESOURCES CENTRE

2
PLANNING & STAFFING

BY

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FOREWORD

The Scottish Educational Film Association has had a long history of identifying significant ideas in the field of audio-visual aids and producing publications which stimulate thought, encourage participation of teachers and illustrate examples of present practice.

In the re-organised structure of local government, the expanding world of educational technology and the increasingly "tight" economic situation within which the educational service has to exist, this second publication in a group of five on the topic "The Setting Up of a Resources Centre" should prove an extremely valuable addition to the growing list in this sector.

It is, in fact, designed for teachers and assumes that they are at the start of the exercise in creating a Resources Centre.

It should appeal to teachers because of its practical and detailed conspectus of current practice; college lecturers will find its range of examples useful as illustrative material; administrative staff will be able to scan it for ideas and comparisons with their own situations. All should find its variety stimulating.

One point which should be stressed in the light of economic forecasts is that much can be done from existing resources. As one of the writers puts it "Most centres have grown out of the enthusiasm and vision of staff already working within a school". The various examples emphasise the point that planning and commitment of resources depends upon success already achieved. At whatever stage of development in building or staffing a school finds itself, it should be possible to identify a harmonious comparison in one of the sectors of this book. Without alteration of premises or additional staffing, it should be possible for the school or even the individual teacher to generate the sort of success which will give a base for development some time in the future.

The working group which has produced this publication and particularly Mr. Tucker, the author, are to be thanked most generously for bringing it into being. I am particularly grateful to the teachers and educationists who by their vision and effort have developed the various examples and allowed them to be illustrated in this book.

C.C. Roxburgh, B.Sc., M.Ed.,
President,
Scottish Educational Film Association.

23rd April 1976

PREFACE

This book is the second in the series "The Setting up of a Resources Centre", which is produced by the Scottish Educational Film Association. The Association is a voluntary body of teachers and others interested in the promotion of audio-visual aids and educational technology.

The Association acknowledges a debt of gratitude to those who formed the working party, who gave so generously of their time and expertise.

Mr. D.C. Butts
Mr. B.H. Gill
Mr. J.R. Graham
Mr. Ross Hoey
Mr. A.H. Malcolm *(Convener)*
Mr. George Paton
Mr. M.W. Paton
Mr. J.K. Sinclair
Mr. A.M. Stewart
Mr. Norman A. Wright
Mr. R.N. Tucker *(Secretary)*

Grateful thanks are given to the Scottish Development Department for invaluable advice and assistance.

The graphics were drawn by John Marshall.

INTRODUCTION

Whether a school, wishing to develop a resources centre, is an old building needing conversion or still a set of lines on an architect's drawing board, decisions have to be taken concerning the spaces to be allocated to that resources centre and the development of resource based learning.

Without usable space little can be done, but the provision of space within a building does not in itself lead to the establishment of the correct facilities. As was pointed out in the first book in this series, a detailed analysis of needs is more likely to produce an effective set of decisions. The *use* of space within a learning resources area will depend on the methods of teaching and learning, the management of staff and the organisational structure of the support services.

It is tempting to look at the existing resources centres and attempt to abstract a single uniform pattern which can be applied directly to one's own school situation. But the fact that at the moment they all appear to be different, have different management structures, different lists of hardware and different methods of working, points to the conclusion that the successful resources centres have grown from local needs and are subject to local constraints. There is obvious danger in constructing models which take no account of specific local needs, since these might be slavishly imitated.

This book, therefore, does not set out to construct models, but gives a number of examples from which principles might be abstracted which suit each reader's criteria.

The first part of the book concentrates on the answers provided by the planners (architects, administrators, and teachers). Each example is of an existing school, with the exception of one which is in the early stages of construction. The schools are described but not identified.

The second part of the book consists of a number of studies of Primary and Secondary schools which have created resources centres without the benefit of Authority planners, working simply with what they had within the school. These are not attempts to measure the success or failure of any resources organisations within a school. Rather they are brief outlines of the way in which the theory is being turned into practice in the face of all the difficulties which daily hamper the progress of education.

NOTES

These examples are arranged as follows:

PRIMARY SCHOOLS

Examples a, b and c are of existing Primary schools in which different solutions have been developed through alteration and rebuilding.

Examples d and e show new Primary schools in which the requirements of the resources centre have been incorporated in the design.

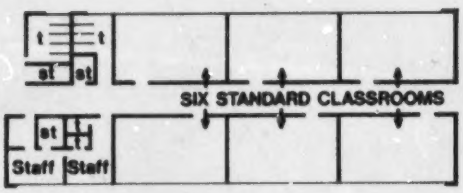
SECONDARY SCHOOLS

Example f is a Secondary school which has been altered to allow for the development of a resources centre.

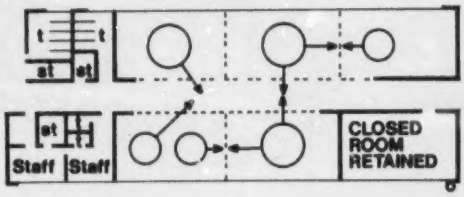
Example g shows a new extension to an existing Secondary school.

Example h shows a new Secondary school, custom built for an intensive use of resource based learning.

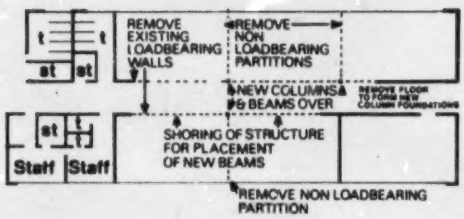
Example a: **Remodelled Primary School**



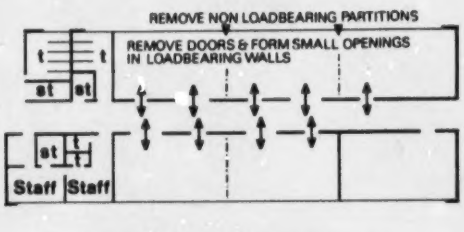
1. EXISTING LAYOUT



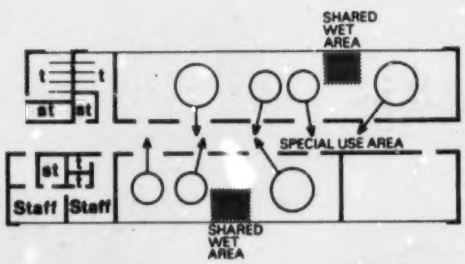
2. PROGRAMME OBJECTIVE



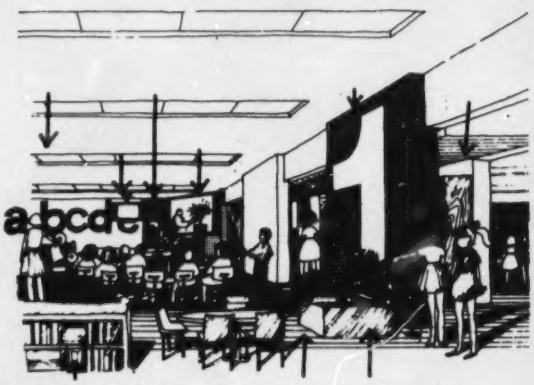
3. STRUCTURAL IMPLICATIONS OF COMPLETE OPEN PLAN



4. PARTIAL OPEN PLAN



5. USE OF SPACE



6. THE RESULT

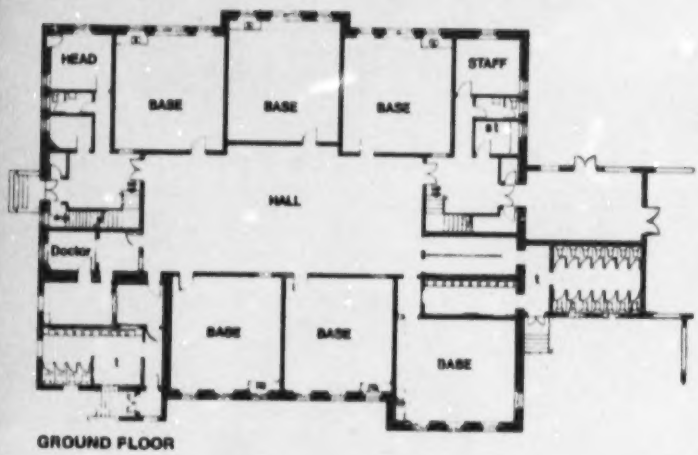
Example a

Schools built in the period from the end of World War II until the early 1960s show a cellular structure which is difficult to alter to suit the changing demands of education. The postwar increase in the birth-rate necessitated a large amount of school building and this particular form can be found in all parts of the country.

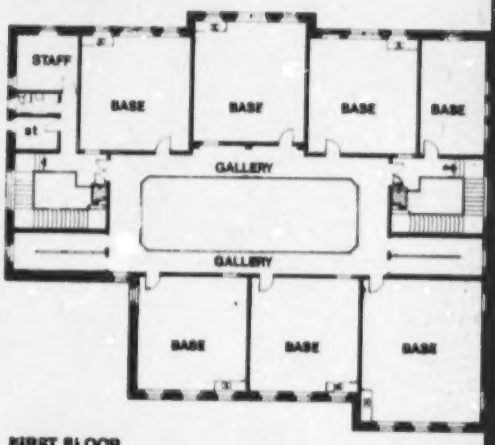
1. *Existing layout* The existing layout of six classrooms is restricting both physically and educationally with a school roll of more than 200.
2. The objective of the programme of alteration was to establish an open learning area to cope with different group sizes and a variety of learning situations in an environment with excellent inter-group communications. The obvious solution is to remove *all* the existing partitions.
3. Such a solution is possible but very expensive since it would require the removal of the load-bearing walls on either side of the corridor, the non-load-bearing partitions between the classrooms and the excavation of the floor in order to lay new foundations for the necessary pillars. New pillars and load-bearing beams would be required.
4. A partially open plan can be achieved by removing the non-load-bearing partitions and the doors. Openings can then be cut in the load-bearing walls. This gives a great deal of flexibility. The feeling of a continuous open space is enhanced by the laying of carpet over the whole area.
5. The central area can now be used as a resources area, or for small group or individual study. The larger space can be shaped by using furniture as space dividers.
6. The resulting space can be treated with bright, cheerful colours. Carpeted throughout it will permit multiple group activity, while keeping noise at an acceptable level.

Example b: Remodelled Primary School

ORIGINAL PLAN

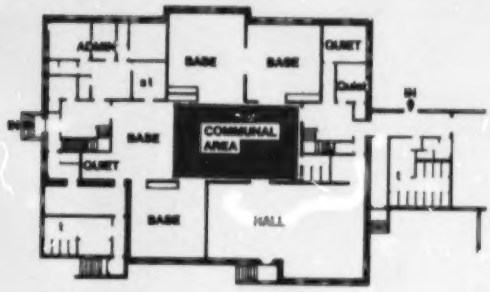


GROUND FLOOR

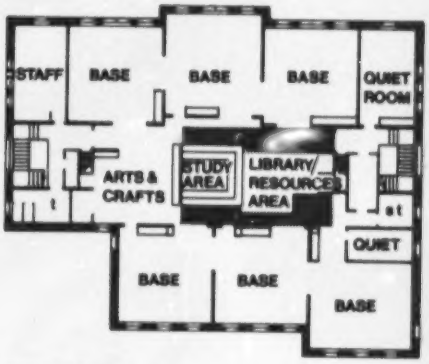


FIRST FLOOR

ALTERATION

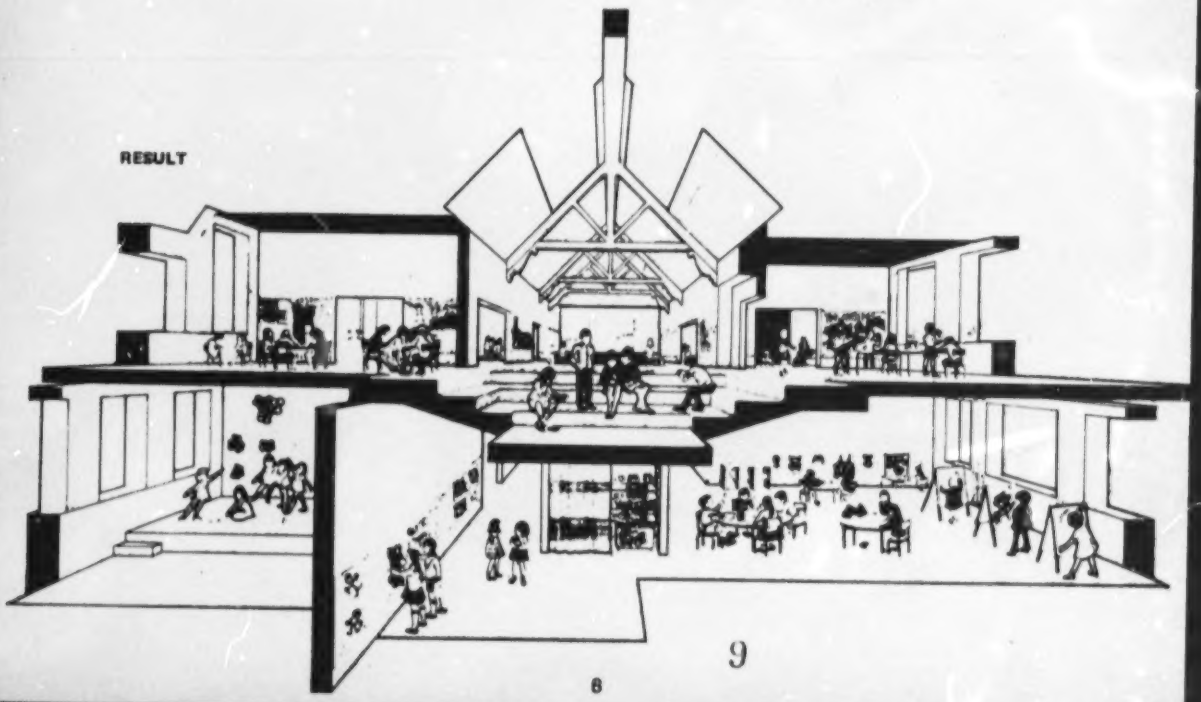


NEW GROUND FLOOR



NEW FIRST FLOOR

RESULT



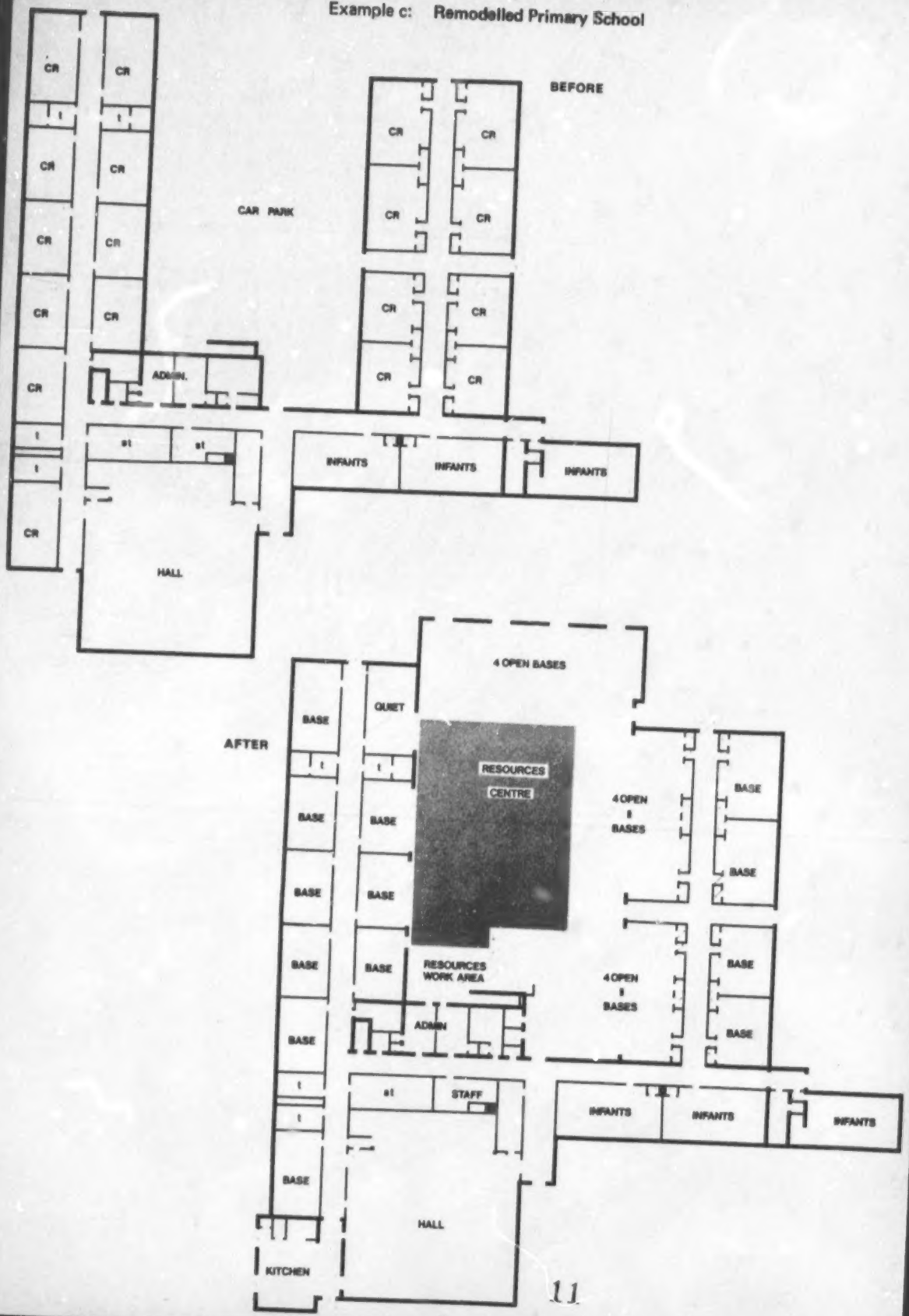
Example b

The School shown in the plans on the upper part of the opposite page should be very familiar to many. It was perhaps the most common form of school plan at the end of the Victorian period. Many such schools still exist and their tiled walls and painted dadoes have often lead to their being referred to as being similiar to prisons.

The problem facing the planners was to alter the school in such a way that it could take an increase of the roll to 320 pupils and allow for the required changes in the methods of teaching.

The original design had rooms opening on to a central hall on the ground floor with access from the gallery to the upper classrooms. By building a deck across at the gallery level, floor space has been increased dramatically. Most of the walls have been removed, creating a series of study bases with access to a central resource area on both floors. On the upper floor a sunken study area has been built. Necessary "quiet rooms" have been located at the corners of the building. Moveable furniture facilities the alteration of the size of each base to cope with large group work.

Example c: Remodelled Primary School



Example c

(BEFORE)

This school was built in 1950 in the form of a long line of classrooms on either side of a corridor (seen on the left of the plan). In 1957 a second wing of classrooms was added.

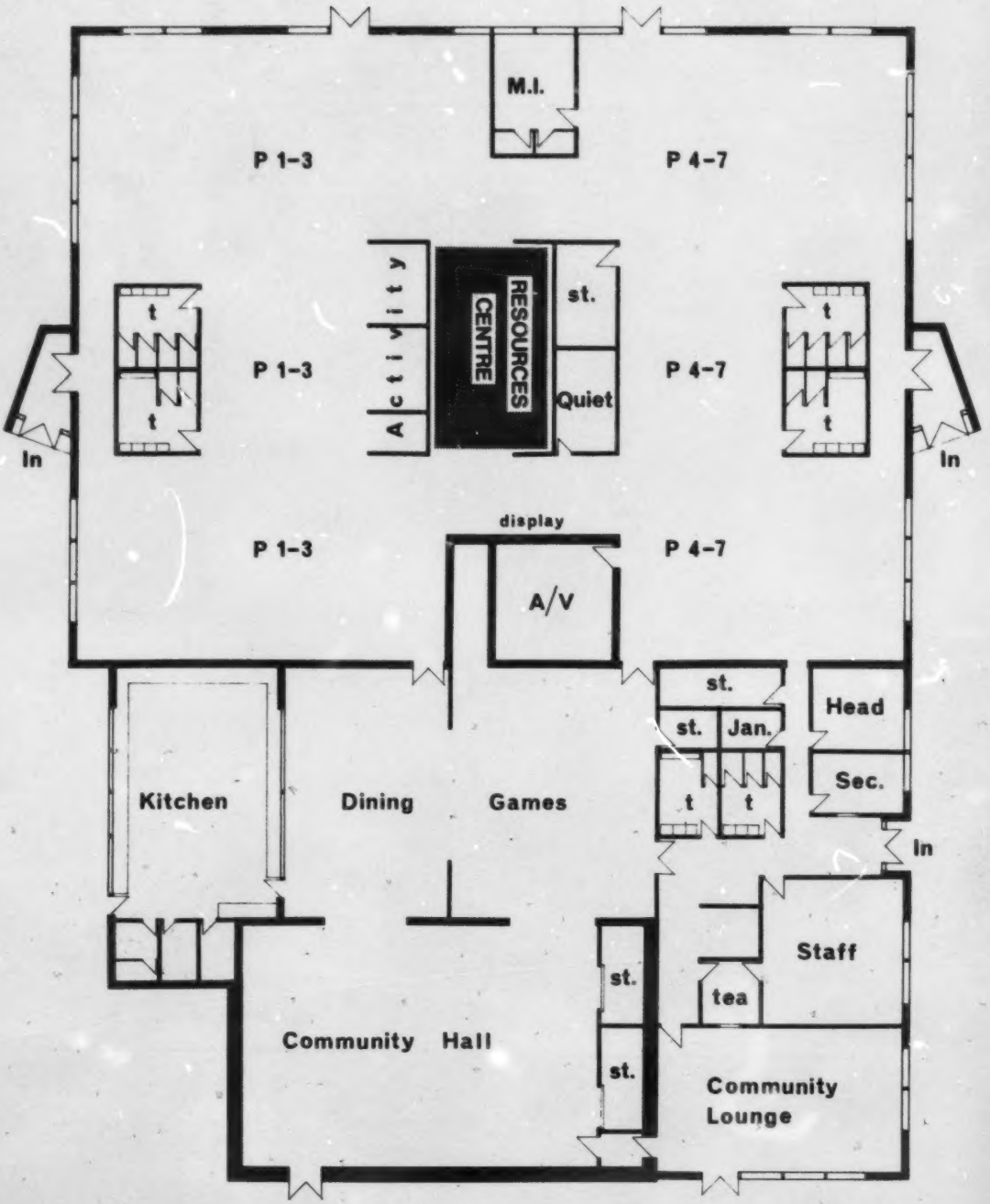
This conventional form of design made organisation of resources within the school very difficult. Contact from one classroom to another was far from easy.

(AFTER)

A later rise in the roll to 700 called for a more radical planning solution. The space between the two wings of the school, formerly the staff car-park, was roofed over and the walls of the adjacent classrooms removed. This results in a large open-plan area with bases along three sides. Closed classrooms remain along the outside edges of the former wings.

This solution resulted in a large open space but not all the classrooms could be linked to it. However the school now has a variety of teaching/learning situations from which to chose.

Example d: New Primary School

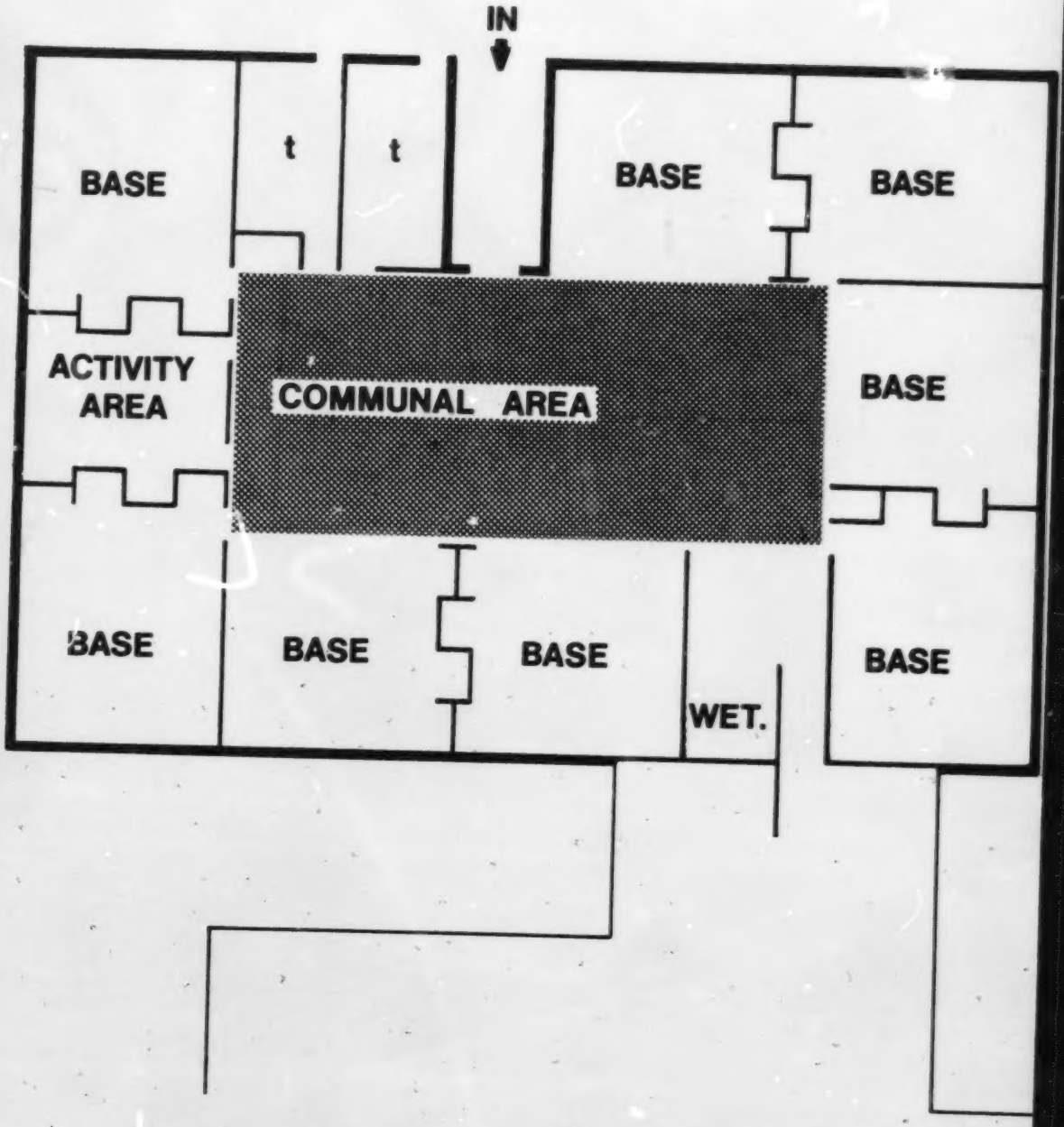


Example 2

In this, a new type of primary school with a roll of 210 pupils, there is a distinct and separate central area for resources. This central siting, in what is basically an open plan building, allows easy access by both the infant and senior pupils.

This is an unusual solution in terms of planning since much of the development of primary schools has been to create an environment whereby the whole school acts as a learning resources centre. Such a plan results in well-defined flow patterns of activity which can be regulated easily. By the same token this plan does not encourage the more fluid interaction between groups and individuals found in buildings with large open spaces.

Example e: New Primary School

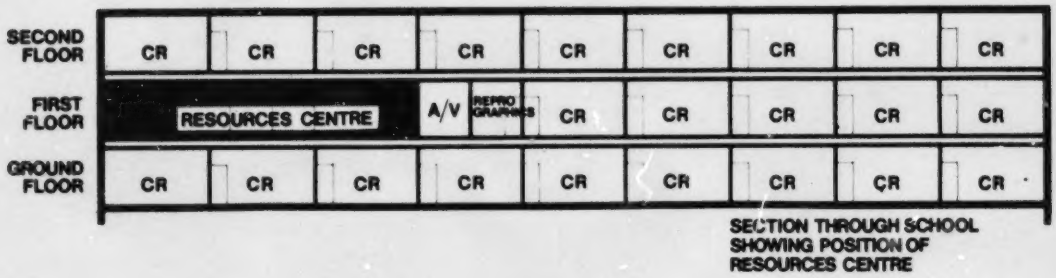


Example e

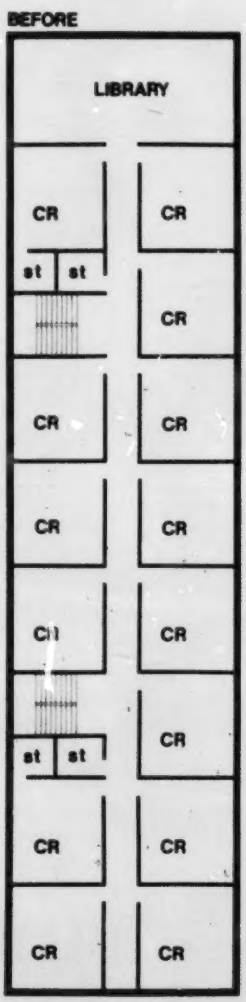
Part of a school built as a series of 3 modules, surrounding a central core, this is the PVI – VII unit of a school for 560 pupils. The class bases open on to a central resources area. This allows for variable grouping, according to the learning situation desired. The fluidity of such an arrangement means that resources can be moved with ease to the point at which they are required. The lack of divisions between the bases and the resource area results in the whole unit becoming a resource-based learning unit.

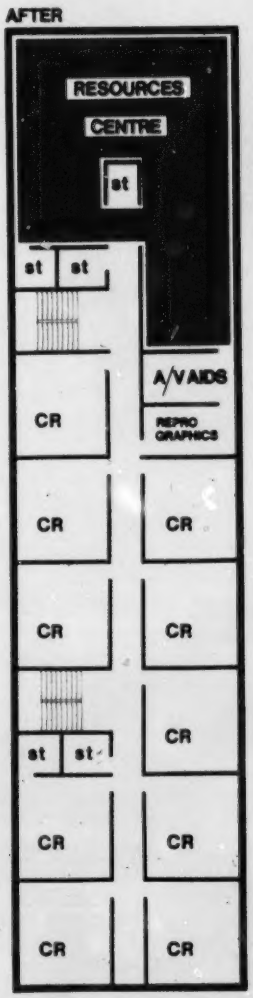
The organisation of staff and auxiliaries in such a modular system may be quite complex. With only three auxiliaries it may be difficult to assign one to each module and still maintain central services. This plan may require some duplication of services throughout the school but this is balanced by the ease of pupil access to the resources and services at the centre of each module.

Example f: **Remodelled Secondary School**



SECTION THROUGH SCHOOL SHOWING POSITION OF RESOURCES CENTRE



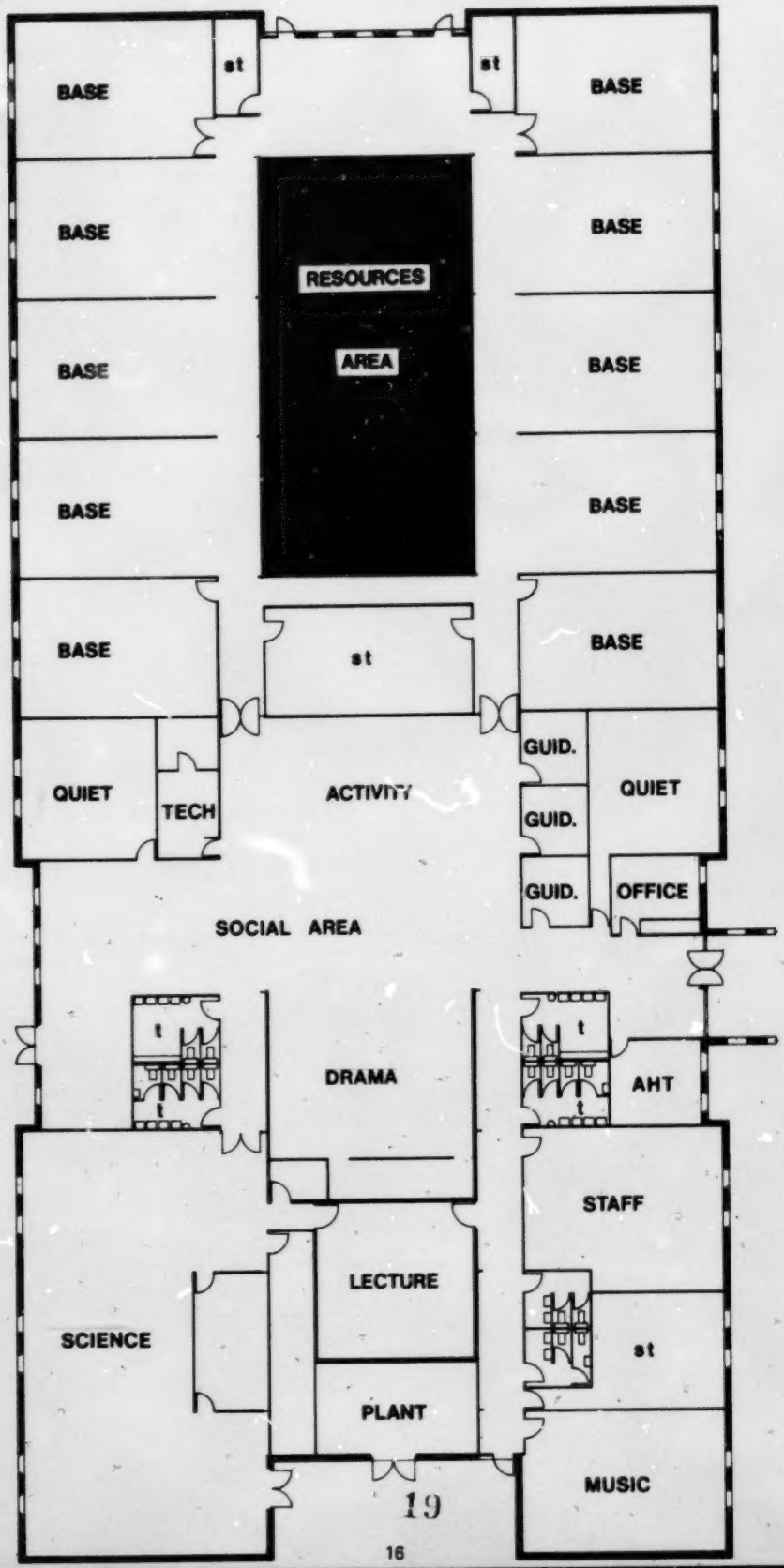


Example f

This is a typical example of a secondary school with a roll of 1000, built in the late 1950s or early 1960s. The library is situated at one end of the middle floor. Taking this as the logical place in which to develop a resources centre, the planners have extended the library space through two former classrooms. A reprographics room and an audio-visual materials preparation room have been added, together with storage space.

This pragmatic approach, requiring the smallest possible alteration of the building, gives reasonable access from the rest of the school.

Example g: New Secondary School

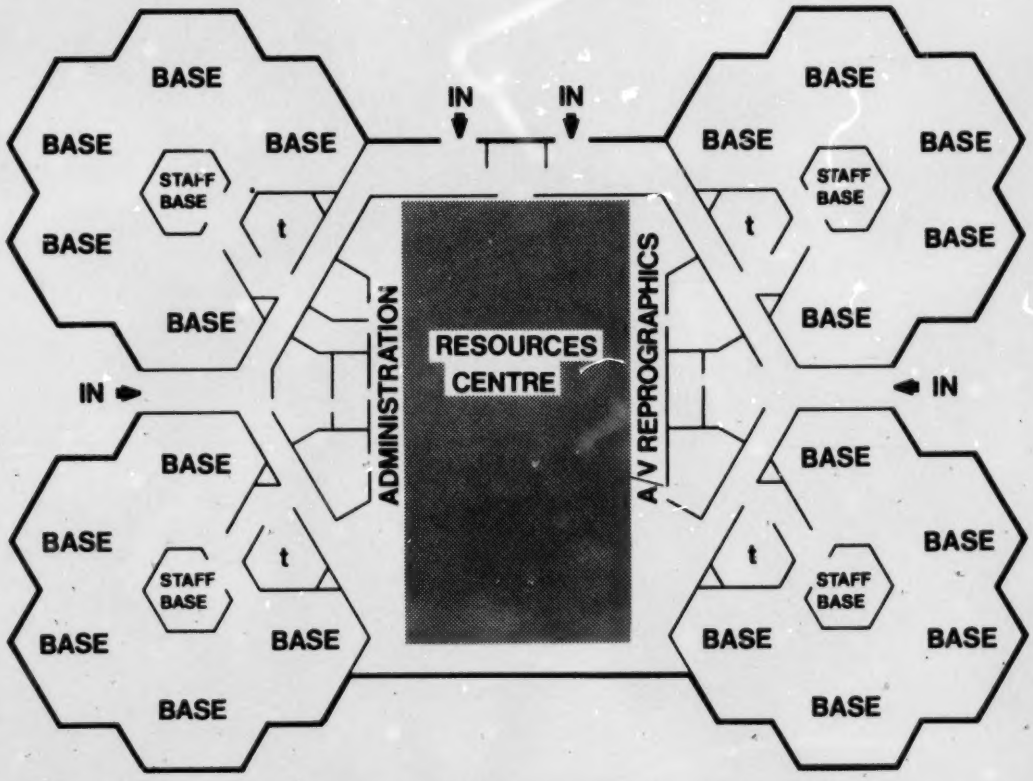


Example g

A new unit to be added to a comprehensive school to cater for 480 SI and SII pupils. The open-ended bases allow access to the central resources/project area. The partition walls of each of the bases can be moved to give an infinitely variable range of spaces. The main innovation in this form of school building is that it is twice as wide as the conventional school (see case f). This gives far greater possibilities of lateral and longitudinal re-organisation for different learning situations.

The central resources area can be sub-divided by using moveable furniture to provide distinct areas for various activities.

Example h: New Secondary School



Example h

This new secondary school is constructed in a series of cellular blocks round a central unit. The plan shows the second of three floors, in which each section is linked to a master dial access resource system through the teachers' bay in the middle of each of the four "pods".

The school also incorporates a Primary section and has a total roll of 1500. This is a radical and expensive solution to the need for a building that is suited to the use of modern technology.

NOTE

Staffing in Secondary Schools

No staffing figures have been given in any of the foregoing examples. Since the schools differed so radically there was no real relationship between the staffing figures for any one case and any other school that could be indicated clearly.

The following figures are theoretical provisions of staff for Scottish Secondary Schools. However, it should be noted that economic reality, and development theory, will mean that such a provision may be difficult to find or may be superseded by further recommendations.

School Roll: 1000

Number of Teachers: 66 (approx.)

Existing Staff Complement:	**Deployment in School with Resources Centre**	
A *Clerical*	*School Generally*	*Resources Centre*
1 Admin. Assistant	1 Admin. Assistant	
1 Typist/Clerkess	2 Typists	
2 Typists		1 Typist
B *School Technician Service*		
1 Principal Technician	1 Principal Technician	
1 Senior Technician	1 Senior Technician	1 Main Grade (Graphics Tech.)
3 Main Grade Technicians	2 Main Grade Technicians	
2 Technicians	1 Technician	1 Technician (A/V Aids)
C *Library Service*		
1 Librarian		1 Librarian

Part II

Case Studies

This part of the book presents case studies on schools which already have resources centres. In each study the school is described but not identified. The studies were all carried out by an unbiased observer within a few weeks of each other. Since the visits to the schools were made several months before the publication of this book, the case studies describe centres which no longer exist, as they have all developed in the intervening period. It is felt that the presentation of these studies will be useful to those considering setting up a centre, since each of these centres has advantages and disadvantages.

There are possibly aspects of each case which those in charge might change were they to start again.

It is not the intention of this part of the book, to attempt to establish models which can be copied. Rather it is hoped that the experience of others might serve to highlight points which might be relevant to the reader's own situation. These studies might present alternative answers to some of his problems.

CASE ONE

The School

This school was built in the early 1960s and is similiar in design to that shown in "Case f" (page 15) it stands in a "no-man's-land" between two small towns. New housing developments are springing up around these older towns, with a resulting mixture of local and incoming people. Old industries such as mining are continuing and new factories, many based on chemical industries, are being built, while there is still an active agricultural community.

The school has a roll of about 1,000 pupils with a nominal staff of 68. In 1969 the school "went comprehensive" and for the first time was required to teach [what were designated as] mixed ability classes.

The Resources Centre

The resources centre forms part of a small complex which includes the library, the technician's workshop and the teachers' preparation room. Separated from the library by a stair well, the resources centre has been made out of two rooms formerly used for geography and the associated cupboards and preparation rooms. At one end is the reprography area which contains materials for the staff to use in the preparation of learning resources. A short, wide corridor joins this room to a larger room with a central arrangement of carrels, storage equipment around three sides and cupboards running under the windows. A bench surface forms the tops of these cupboards and is used for individual or group work.

Between these two rooms is the equipment store and a small darkroom.

Staff

The resources centre is under the direction of the Assistant Head Teacher (Curriculum) with one other member of staff in day-to-day control of the centre itself. In addition there is a chartered librarian, responsible for the school library, a typist and an audio-visual technician.

Development

For many years the Head Teacher had listened to HMIs and others extolling the virtues of resources in the classroom. Before the decision to set up the Centre was taken the staff had been using work cards and work sheets with academic pupils and saw that technological advances might enable them to improve on some of their "chalk and talk" techniques. The change to a comprehensive system gave an opportunity to put ideas about resource-based learning into practice.

Once the basic decision had been taken by the head teacher it had taken him two years to persuade the rest of the staff and the education authority of the need for a centre. The staff eventually responded to constant propaganda. At

first this was done at meetings of principal teachers but within a few months almost all the staff were involved. In-service courses were arranged with guest speaker from other centres and bulletins were issued to all members of staff to keep them informed. County organisers were enlisted to work with the staff to help them adapt their teaching methods to utilise the newer materials and techniques of individualised learning.

This was a long and delicate process, which gradually built up the demand from the staff for a resources centre. The changing of teachers' attitudes and methods was seen as his first objective by the Head Teacher. Through staff involvement at all stages, he ensured their support and attempted to avoid some of the grosser errors that can result from blind imposition of new methods by management.

At this stage of development the Head Teacher believes that a great deal of groundwork is still required, but that if this is successful then the centre can generate its own enthusiasm – the philosophical conviction produces its own practical solution.

The practical solution to the problem of setting up the centre was to select rooms as close as possible to the school library. In order to do this a fairly complex plan was evolved for the reallocation of rooms and the redeployment of parts of the Geography and Science Departments.

Initially the centre was fitted with whatever furniture could be found around the school. Later twelve carrels were built in the midle of the room, with power supplied through a conduit along the top of the central partition. This is fed by cable drawn out of two inertia reels suspended from the ceiling.

Present Operation

The centre is used by both staff and pupils, there being times when classes and groups are timetabled into the centre. Pupils doing project work can use materials in the centre, or take them out for work in the classroom. As integrated and inter-disciplinary studies grow in the school, there is an increasing need for the creation of materials. At the moment most of the production is in the form of kits for Guidance Integrated Studies for RSLA pupils. These are made by the staff – a team of principal and assistant principal teachers under the direction of the Assistant Head Teacher (Guidance). Other team writing is still done in subject groups with the resultant materials being held in the Centre.

It is found that most teachers are too busy to spend school time preparing materials for the Centre. This is normally done in their own time. Pupils are also involved in the making of materials, arising from their project work.

Library requisitions, processed by each head of department, are now extended to include non-book materials.

Although the school library is classified by Dewey and has a classified card index the centre uses a post-coordinate index (OCCI). This choice was made after visiting other centres and being impressed by the amount of information the system could carry and the speed of access. The school has not yet been able to assess whether this has been the correct decision since the mechanical punch for the cards has been out of order for several months.

Staff are required to choose the keywords and punch the cards although pupils are now becoming involved. The time required for a typist to prepare feature slips for each entry was 45 minutes, but this was felt to be due to lack of familiarity with the system and its techniques.

Plans for Future Development

Plans are being made to release teachers from several subject areas from teaching duties for blocks of two days at a time to prepare integrated materials with other subject teachers. The involvement of pupils is to be stepped up by careful planning of their project work. Team-teaching and interdisciplinary work, which has been developed in the first two years to be extended to the Third year pupils and into an ambitious joint Primary/Secondary bridging project.

This latter project will involve feeder Primary schools but it is realised by the school that the implementation of these aims are dictated by the speed at which they can be tackled. The staff situation is crucial – not only because of general staff shortages or lack of staff who have the time to become involved in these projects, but also because of the need for members of staff to realise the importance of the concept and who are dedicated to the ideas, and ideals of the resources centre.

The Head Teacher comments, "I am convinced that team teaching has a big part to play in education, particularly in the first two years, but so long as staff is short, so long as staff are being "brought up" in subject disciplines and subject disciplines only, so long as the colleges are not spreading their ideas to incorporate guidance activity and all the other things a teacher does, so long as they are time-tabled by subject – then these are constraints on our ability to promote resource centres and resource-based learning".

Decisions have yet to be taken on the training of pupils in the OCCI system. At the moment most of the use of the system is by staff. A change would lead to a reconsideration of the problem of open or closed access for materials. Much of the material is held on closed access, not for reasons of security, but to ensure that items are returned to their proper places. Training of the pupils would reduce the need for supervision. Losses have been remarkably low; only two film strips being lost in the first year or operation.

Equipment

A list of equipment is given in an appendix to this case study. Certain aspects of the equipment and its distribution, as they affect the planning and staffing, are worthy of comment.

Resource Centre: Here there is sufficient equipment for the software items in the resources centre.

Library: There are seats for forty pupils, and pupil monitors are used. The card catalogue uses Dewey classification with author and classified files. There is no

audio-visual equipment used in this space and at the time of this survey there was no integration of book and non-book items.

Technicians' Room: situated next to the library, this small room is used for all master recording, copying and equipment maintenance. The IVC Videotape recorder and the camera are housed here. Only ten tapes were supplied with the VTR which has proved to be an inadequate supply for the recording and play-back required within the school. The staff took a democractic decision to allocate two rooms solely for TV viewing, preferring to take the class to the material rather than the material to the class. As with the other departments there is an expressed need for more auxiliary staff. This is made more urgent as the demand for off air recording of both audio and video rises.

Reprography: the duplicating equipment is kept in the "staff" area of the resources centre. While the equipment is adequate (a Xerox machine is on loan from the County Council for a trial period), there is as yet no control of the operation and an evaluation of different reprographic methods. No analysis of print costs has been done, nor is there any control over the quantity, quality or layout of copies since content, illustration and design remain the responsibility of the department requiring the work.

EQUIPMENT HELD IN THE RESOURCES CENTRE

Slide and Filmstrip Projector	2
Slide and Filmstrip Projector	1
Slide Projector	1
Combined slide/tape unit	1
Headphones for above	10
Record Player	1
Microfiche Reader	1
Filmstrip Viewer	1
Tape Recorder – open reel	1
Tape Recorder – cassette	2
Back-projection screen	1
Card Cutter	1
Metric Ranging Rods	6
Photo Copier	1
Display Boards	4

Equipment held in other departments of the school

It is usual to find equipment spread throughout a school, in this case in sixteen separate departments. Here the school had a system of registering the machines in a central maintenance index. Such detailed knowledge of the school holding of equipment is not always the case.

Tape Recorder – Spool	18
Tape Recorder – Cassette	2
Record Player	9
Stereo Record Player	1
Hi Fi System	2
Loud Hailers	2
Loud Speaker equipment	1
Portable Language Lab	5
Slide/Tape Unit	1
Language Lab Units	30
Automatic Slide/Tape Unit	1
Headphones	10
Video Tape Recorder	1
Episcope	1
Epidiascope	2
O.H.P.	17
Slide/Strip Projector	23
Slide/Strip Projector (short focus)	1
Rotary Magazine Slide Projector	1
8mm Loop Projector	1
Super 8mm Loop Projectors	2
8mm Film Projector	1
Screen movable	9
Map Hangers	3
35mm Camera	2
Transparency Maker	1
Cine Camera	1
Enlarger	3
Microfiche Recorder	1
Filmstrip Viewer	1
Back-projection screen	1
Display Stands (Peg/Pin)	4
Stencil Cutter	1
Ink Duplicator	2
Spirit Duplicator	1
Heat Copier	1
Photocopier	1
Binary Counter	1
Adding Machine	6
Programmed Learning Machine	14
P.L. Board	10
Metric Ranging Rods	6
Card Cutter	1

CASE TWO

The School

This is a primary school built over one hundred years ago. Built of red sandstone with high arched window and neo-gothic porch it is typical of its time. Little has changed inside the main structure. The heating has been updated but the floors are still the original boards.

Recently an extension with one classroom was built to house P1 and P2. This also allowed for the building of new toilets, a new entrance hall and the refurbishing of the one room that is used as a staff room, office and headmaster's room.

The school is on the outskirts of a small county town in a rural county. The school stands between the small new housing estate on the edge of the town and farming areas, drawing its pupils from both communities.

There are 91 pupils in the school, a staff of 4 including the headmaster, and one auxilliary who acts as secretary and undertakes general administration.

The Resources Centre

The resources centre is one of the three original classrooms. With the building of the extension it became possible to use one of the rooms as a resources centre. Little has been added to the room. Small screens made of peg-board divide the room into six sections. Shelves are attached to the backs of some of the screens, and the few items of equipment possessed by the school are to be found in these areas, which are designated Maths, Science, English, French, Music and Art. These areas are served by two tape-recorders, each with a six-way listening post, one film-strip viewer and one filmstrip/slide projector. The Science equipment is made up of jam-jars and plastic detergent bottles. In one corner there is a cupboard which acts as the paper store.

Staff

The centre is organised by the Headmaster, but run by all the staff. The establishment of the centre has enabled the staff to adopt the integrated day. The school timetable has been arranged in such a way that there is always one teacher free of classroom responsibility, on duty in the centre. (See sample timetable). In P5 6 7, each pupil has his or her own timetable each week. From this the pupils work in groups or individually, either in the classroom or in the centre, as is appropriate. The work done is checked regularly and the timetable rewritten should any pupil be performing unsatisfactorily in any area. At the time of the survey, individual timetables were being introduced to the P3 4, class and the instructions on the operation of these was being carried out by peer-group-training. It appeared that although no such instruction had been given, the P3 4, pupils saw the timetable as a set of targets and were starting to complete the work inside the alloted time. The extent of individual work by pupils has allowed the teachers to do more individual and small group tuition than had been possible prior to the establishment of the centre. An additional effect has been better relationships between the teachers and pupils since more time is spent in individual contact.

Development

The Headmaster felt that he had been using resource-based learning and running the centre for some time before he had learned the term "Resources Centre". The changes has been made in the light of what seemed to be necessary and right for the school. Many of the ideas had come as a logical extension of the Primary Memorandum, with a good deal of assistance from his County Primary Adviser.

Much of the development sprang from the creation of work sheets, still considered by the staff to be one of the most important aspects of the work. This led naturally to the need for the centre being designed to cater for the needs of groups as well as individuals.

The actual creation of the centre – the purchase of the screens took most of the available allocation for the school (£88). The basic equipment had to be purchased later. Most of the books and cards now in the school were inherited. Subsequent purchases of books have been made easier by the adoption of the integrated day since it is necessary to buy only a few copies of any book.

Initially there was a problem training the pupils to use the resources centre and the individual timetables. The children needed to be trained to take the responsibility of work within the new system. However, this was soon found to be easier than had been envisaged and now the older pupils train the younger ones. This is part of a pattern of school activity in which the pupils have their own committees which delegate work and see that jobs are carried out correctly.

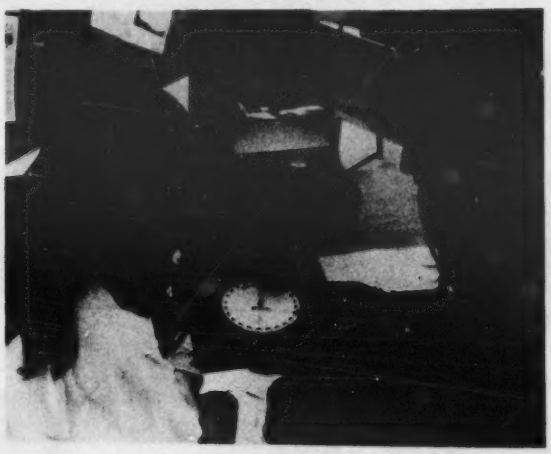
An essential element in the development of the Centre is finance. Once the screens had been bought, finance had to be sought from outside sources. To supplement the normal capitation allowance the children set up a shop, which they now run. They purchase goods such as crisps wholesale and make about £50 profit every year. The P.T.A., whose involvement in the school has grown steadily, contributes about £30 per annum.

One additional area was added to bring the development of the centre to its present state.

In the conversion of the school the old entrance porch was sealed off at its outer end, and has now become a small library. It is also used as a recording studio for the pupils' taped reports and for the production of the school magazine on a spirit duplicator.

Present Operation

The successful operation of the resources centre has arisen from the solving of the problem of management. With one teacher always on duty, children feel free to use the resources centre in the knowledge that there is some support. The staff can also use this time for the creation of new materials, which are almost always related to project work. The greatest amount of staff time goes into the planning and designing of worksheets which are then produced by the school auxiliary. The material has to be judged carefully to cover a very wide ability range. The staff are concerned that the organisation should be in the background and not overshadow the real object of creating a good learning environment.



The stimulus to group and individual work which has been provided by the centre is now reflected throughout the school – in a sense the whole school has become a resources centre. Its small scale is obviously an advantage in this respect. The paper storage cupboard is perhaps the most important resource for the pupils. From this they make up their own jotters and project books. In this way better quality paper can be used with wall paper for the covers. All the pupils have access to the cupboard and have learned to make up books with the right mixture of plain, ruled and graph paper to suit their current needs. Because the books are thinner than ordinary jotters they are not used for such long periods and consequently do not get as "tatty" as books or jotters.

Initially, the school underestimated the needs of the children and were taken aback when they used ten thousand sheets of paper during the first term. Careful record-keeping has shown that working individually, the children do far more work than under the previous system. Such an observation by the headmaster is conditioned by his awareness of the possible effect of the small number of teachers. Their current enthusiasm may be an appreciable factor in this increased work rate together with the Hawthorne Effect of Change. Diagnostic checks show an appreciable increase in the general level of reading ability.

Plans for Future Development

It is hoped to increase the involvement of the P.T.A. and attempts are being made to persuade parents to work in the Centre with the children. In this way it is hoped to give the parents a greater understanding of the children's work and also for the children to have a chance to tell the parents what they are doing.

There is need for support from the local teachers' centre, especially if teachers are to be released for the production of materials, but the teachers' centre is not yet open.

class 1 & 2 = 22 pupils
class 3 & 4 = 33 pupils
class 5,6,7 = 38 pupils

register classes

TIME–TABLE

Full class for first period in the morning

	CLASSES 1&2	CLASSES 3&4	CLASSES 5,6,7		CLASSES 1&2	CLASSES 3&4	CLASSES 5,6,7		CLASSES 1&2	CLASSES 3&4	CLASSES 5,6,7		CLASSES 1&2	CLASSES 3&4	CLASSES 5,6,7
MONDAY															
CLASSES IN CLASSROOMS	A	B	D	MORNING INTERVAL	A	C	D	DINNER INTERVAL	B	C	D		(A)	B	C
OPEN RESOURCES AREA		C				B				A				AUXILIARY D	
TUESDAY															
CLASSES IN CLASSROOMS	A	C	D		A	C	D		A	B	D		(A)	B	C
OPEN RESOURCES AREA		B				B				C				AUXILIARY D	
WEDNESDAY															
CLASSES IN CLASSROOMS	A	C	D		A	B	C		A	B	D		(B)	C	D
OPEN RESOURCES AREA		B				D				C				AUXILIARY A	
THURSDAY															
CLASSES IN CLASSROOMS	A	B	D		A	B	C		B	C	D		(B)	C	D
OPEN RESOURCES AREA		C				D				A				AUXILIARY A	
FRIDAY															
CLASSES IN CLASSROOMS	A	C	D		A	C	D		A	B	D		sewing (A)	B	C
OPEN RESOURCES AREA		B				B				C				D	

Sewing: Monday Teachers A Class 1 & 2 Room 1 – 23 Open
Tuesday B & C 3 & 4 Room 3 – 33 Area
Wednesday D 5, 6, 7 Room 2 – 38 Room 4
TEACHER A

CASE THREE

The School

This is a modern primary school opened in 1968. It was the first of four primary schools designed to serve the needs of a new housing scheme for 15,000 people on the outskirts of a large industrial city. Once the other three schools had been opened on the housing scheme the school population settled down to 500 pupils in two streams. The school is traditional in design with 14 classrooms, a General Purposes Room and two small Tutorial Rooms. All the classrooms are occupied and for a time two classes were in temporary classrooms awaiting the opening of the fourth school.

The Resources Centre

It is difficult to pinpoint the exact time in the growth of this school when a start was made on the organisation of resource based learning. Any school organisation emanates from the philosphy of education held by the Head Teacher.

"Mine is one maintained by many teachers in the profession – to create for each pupil learning situations suitable for his individual ability and aptitude. Now I feel for the first time that the creation of resource based learning in the school will take a major step in the achievement of such a philosophy. It is exciting to contemplate, and to know that in the coming years it will be possible to retain and develop the best that teachers have to offer".

The Resource Centre is now housed in the General Purposes Room but it is important, in any understanding of the place of Resource based learning within the school, to look at the activities within the various subject areas which led towards the establishment of the resources centre.

Development

The first priority was to develop reading and writing skills. In modern education no child can succeed unless he can read, therefore every effort has been made to cater for readers of all abilities. A remedial reading unit was introduced early in the growth of the school. Poor readers were directed to this after assessment at the Primary 3 stage to help them to attain a degree of fluency which enabled them to join in with the work of the class. This concentration of effort on reading during the first three years has proved a success as we consistently maintain a "pyramid" of poorer readers, where Primary 3 is the base, thinning out to the apex at Primary 7.

Class libraries of both fiction and reference books were built up and, as the upper Primary classes were admitted, a central library of reference books was formed. Class libraries remain, however, as pupils are encouraged to use these as ready access for both fiction and reference books. This accent on reading skills has built up within the school a great deal of book resource material which the present cataloguing and retrieval system is failing to handle efficiently.

Mathematics was based on the Education Authority Scheme of Work until two years ago. At this point it was decided to put into operation previous plans for structuring mathematics in the school on a work card system, supplemented by various text books. By doing this it was hoped to use the best of both to fit the needs of individual pupils who, in this subject area, have become exposed to a vastly more complex situation than in previous years.

The Head Teacher stated,
"It was here that we also decided to make a radical change in the school organisation with the introduction of team teaching, into which I had done some research during the previous year. With Primary 2 and Primary 3 this was developed in width under the competent direction of the Infant Mistress. I was fortunate at the Primary 4 to Primary 7 stages in having equally competent team leaders, my then Deputy Headteacher and a teacher with some twenty years' experience. It was with them and a willing staff that we explored team teaching in depth in mathematics. I should point out that it was a traumatic experience for the first year probationer teachers to arrive in school on their first day to learn that they were involved in team teaching, key lessons and open classroom doors. It says much for the quality of these young teachers that they adapted to the situation so quickly".

By the end of the school year 1972–73, team teaching was firmly established in mathematics, and had been extended by the teachers themselves into other areas of the curriculum. It was in school to stay and with it came another mass of source material.

One member of staff had taken biology as a main subject in her Bachelor of Education degree. This expertise, plus Science 9–13 and the Headteacher's own work in physical science, laid the basis for a science scheme for the school. The teacher concerned was given a remit to develop and test this over the year. The result is an assignment card system and yet more source material to control and maintain.

History and Geography have both been taken as areas of team teaching by the teachers. The Head finds that this co-operation between teachers results in a very high standard of preparatory work, a more thorough attention to detail at the planning stage *and* a very definite increase in the demand for a wider range of source material, both book and non-book. This is continuous and must be satisfied; to this end the promoted members of staff have specific areas of responsibility.

In assessing the growth of the resources provision in his school the Headteacher stated.

"The scope and methods of education are continually changing, but it must be a controlled development. The Primary Memorandum of 1965 saw an eruption of new ideas into Scottish Schools, most of which were not ready for them. The lesson to be learned is to develop new themes and methods slowly, spending adequate times in preparation. In our case, for example, team-teaching took a year; Programmed Learning, where the individual approach has influenced my thinking so much since attending the National Programmed Learning Course in 1966, was six months in preparation before pupils were exposed to it, despite my four months Course saturation in it.

The situation I now find in the school and in Primary Education is that each year we are taking a step nearer the achievement of our objective. That the key to this is resource based learning I have no doubt".

The objectives include the development of a fully operative resources centre. Before the conversion of the General Purposes Room books were relatively easy to find using a colour code and shelf or classroom accession system. Related material such as charts, pictures, films, film-strips was all in separate catalogues. Cross referencing of book and non-book materials did not yet exist. The resource material was spread out over six different areas in school, half of it in

cupboards, making retrieval a time wasting process. Much of the material was stored in the corridor outside the main hall, making movement through the school difficult.

Present Operation

Once plans had been made for redeployment within the school, the GP room was divided into storage bays and working areas using existing book cases, boards and angle iron. Utility rather than aesthetics was the governing factor in this conversion.

The first stage of the operation has brought together the hardware and software as indicated in the plan presented at the end of this case study. All the material is available to staff and pupils.

The second stage involves a reorganisation of the indexing system. It is planned to use Dewey for both book and non-book materials. This will be a long-term project as no extra staff will be available for this work.

The third stage will be the continued build up of materials, especially those produced in the school.

Plans for future development

In talking of the future the Headteacher placed the emphasis more on the utilisation of the resources centre in the progress towards resource based learning rather than on the physical development of the space.

He continued:
"Much of the development of school produced material during the current Session is in the production of units of work. This is, in our case, a side effect of team teaching although the same also applies with some class produced work. Many projects are well planned through flow diagrams, lines of development, work cards, source books and audio visual material. When the projects are completed by the pupils all the preparatory work is lost. When another teacher follows on a similar theme she must start from the beginning again. To my mind this repetition of preparation is unproductive and the initial work should be preserved for others to use. When it is taken up again, a teacher can obtain the unit of work from the resource centre, add or subtract from it and put her individual stamp on it. The ultimate with this will be to give pupils a wider choice of structured work than any individual teacher could provide".

Equipment

During the growth of the school over the past few years the volume of school-produced material has increased. To supply this the school has gradually acquired reprographic machines which make the work easier, are less time consuming and enable the presentation of materials to be made more attractive. A photocopier, heat copier, ink and spirit duplicators are all within this section.

Similarly, as the use of soft ware in audio-visual aids has increased so has the need for hardware for projecting it. Three years ago, borrowing a 16 mm. projector from the Education Authority for one day in each fortnight was satisfactory. Now, using an average of ten films a week it was essential to have one for the school.

"The point with both reprographic resources and audio-visual aids is that the soft-ware should create the demand for the hard-ware. The reversal of this leads to "dead" machinery lying about in the school, benefitting no one. This situation can also exist if these resources are developed in isolation then the staff are starved of soft-ware or materials for the machines".

In conclusion the Headteacher added:
"Communication is the essence of it all – communication from Head to staff, from teacher to teacher, from teacher to pupil.

Pupil involvement is essential – feed back on a theme in reading from Primary 7 pupils proved the value of this. It is to them that Resource based learning is directed and close observation must be kept to ensure that this work is to their benefit".

SCHOOL RESOURCES CENTRE – Layout Plan A

Section 1

Mathematics Equipment — Science Equipment

Staff Work Area

Film

Slides P.L. Files
Record Player
Tape Recorder.
16mm Projector
O.H.P. Transparencies
Work Units Teachers Notes

PUPILS WORK AREA

Section 9
Work Units
Filmstrips
Picture Boxes

Section 8
Work Units
Picture Boxes
Film Strips

Section 7
Catalogues

Section 6
Radios F/S Projector
Tape Recorders

Section 10
Programmed Learning Materials
Hymn and Song Books
Tapes/Cassettes

Section 2
Wall Chart Racks

Section 3
Index Card Cabinet
Reporgraphic Materials

Section 4
O/H Projector
Filmstrip/Slide Viewers
Spirit Duplicator

Section 5
Science Trays
Soil Project

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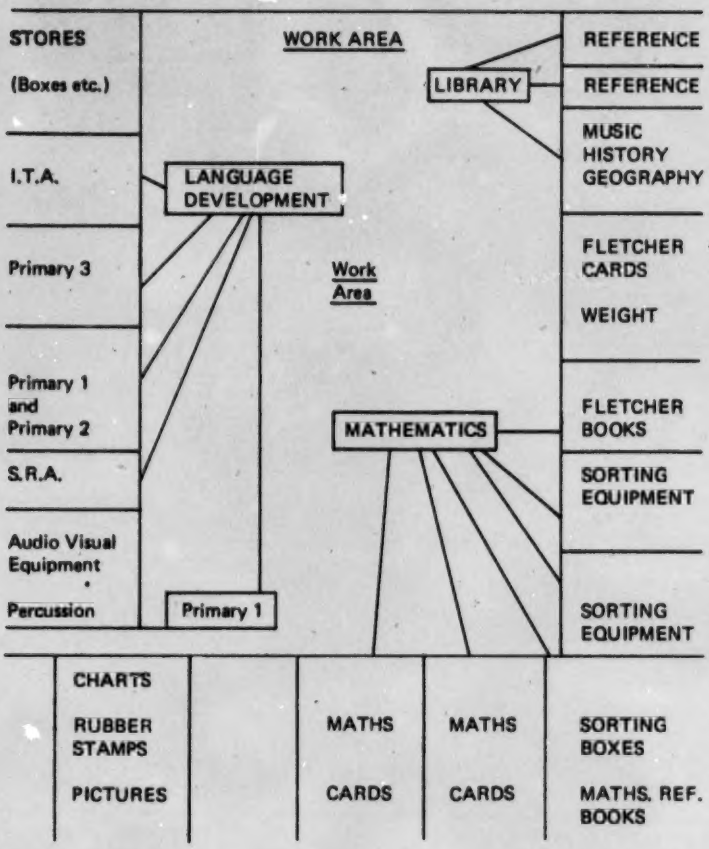
INFANT RESOURCE CENTRE



Audio Visual and Reprographic Equipment

Item	*Location*		
	School Resources Centre	Infant Resources Centre	Administrative Area
Television	1	1	
16mm Projector	1		
35mm Projectors	1	1	
35mm Film Strip Viewer	1		
35mm Film Slide Viewer	1		
Overhead Projector	1		
Radios	2	2	
Reel to Reel Tape Recorders	3		
Cassette Recorders/Players	3		
Spirit Duplicators	1		2
Ink Duplicator			1
Photo copier			1
Heat copier			1
Record Players	1	1	

Part 3

Quote:

"At some point it will have to be recognised that an increasing proportion of people will begin to argue that the education industry is overstaffed and under-equipped".

E.H.W. BRIAULT, *Learning and Teaching Tomorrow*, Occasional Paper 2 NCET. 1969.

Question:

In the face of the changes towards resource based learning and the establishment of resources centres can it not be argued that schools are no longer overstaffed but that they are under-equipped, *and* understaffed with regard to the new skills that are required of the human resources within the system?

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Setting up a Resources Centre within an Educational establishment involves the development of management structures as well as the structuring of the physical environment of the Centre. If the arguments that have been outlined in the previous publications in this series *have any credibility then the Resources Centre movement is founded on attitudes towards learning, new strategies of education, rather than neat architectural solutions or gimmicky methods of shelving. Resource-based learning may be "pupil centred" but it is certainly "people centred". For an establishment to commit itself to a Resources Centre surely implies a belief in the reorganisation of teaching methods within the school.

Whilst such a reorganisation can be achieved without any alteration of staff structure or establishment most of the cases which have been studied, both in this book and elsewhere, have indicated that changes and additions are more usual.

Yet we live in hard economic times: there is no cornucopia from which flow trained specialist personnel to fill all the needs of school. The vast majority of schools have to make do with what they are given under an allocation system based on traditional patterns of organisation. Redeployment of available human resources for maximum efficiency is often the solution forced upon a school rather than even a modest increase in the school establishment.

The choices at the moment appear to be:

(a) *Do Nothing:* Some schools appear to make no alteration of staff responsibilities. A Resources Centre is "placed" in the school and expected to work through some process of osmosis. Even the thickest skins allow some absortion of ideas and a centre established in such circumstances is not doomed to absolute failure. However, it does run the risk of becoming an expensive white elephant.

(b) *Put somebody in charge but give no support staff:* This situation arises far too often from optimism. For example a Headteacher establishes a resources centre in his school, with the support of all or part of the staff, and then is unable or unwilling, either to provide technician and auxiliary staff, or release the teacher who has been put in charge of the Centre from his or her teaching duties. To be fair to most Headteachers the word is "unable" rather than "unwilling". Teacher shortages, lack of additional finance and a lack of understanding on the part of Authorities and Committees can combine to place unbearable restrictions on a Headteacher. However, such situations do exist. In these cases the person in charge is likely to be unable to satisfy the desires of those wishing to use resources and at the same time carry out his own teaching duties. The resulting frustration is likely to end in the slow death of the aspirations of the people involved in the Centre, or the departure of that member of staff for pastures new.

Many centres do run on little more than the enthusiasm of the member of staff and when the Centre succeeds it is usually because of drive, devotion and sheer doggedness on the part of that teacher. This is all very well but there is no way to legislate for charisma, nor can it be demanded.

(c) *Put somebody in charge and re-allocate the duties of other members of staff to provide support:* This is the most common solution to the problem of staffing the resources centre. Sometimes it is possible to create a team of people to run a Resources Centre from within the existing staff of a School. There are many instances in which this has been successful. However, to create this new potential implies the taking away of effort from something else within the school. If teaching staff are assigned to the Centre then, for justice to be done, they must be allowed to give up some of their formal teaching duties. This load will then have to be carried by other colleagues. If a teacher is assigned full-time to the Centre then the School would appear to have lost a complete teacher. Of course, a member

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*A Resources Centre . . . is a state of mind.
The Setting up of a Resources Centre. No. 1. — Basic Ideas.

of the teaching staff, working within a Resources Centre, has not left the teaching staff entirely but the nature of the pupil contact has changed radically.

The same applies to technical and auxiliary support. Because technicians and auxiliaries are usually few in number within any one school, the effect of transferring them from a previously existing duty into the Centre has a much more noticeable effect since the functions they were fulfilling formerly are likely to be left undone. Having said all this there are still examples of schools which have managed to form some sort of structure of staff through this method of re-allocation (see case one).

It is not an ideal solution and often gives rise to difficulties but it is certainly a solution which can work.

There is, of course, the other solution which involves an increase in staff but this will be considered later. The foregoing choices are of necessity over-simplified. The chronology of staff appointment and allocation of duty is of importance when considering the staff of Resources Centres. Many of the best known examples have had the advantage of growth over a considerable period of time. There are not many centres of repute which have been set up as an ideal and then had staff appointment to them. The majority, particularly those which have been running for more than five years, have grown out of the enthusiasm and vision of staff already working within a school. The development of the centre has been concurrent with a steady change in the role of the teacher and the gradual building up of a team of people with specific duties.

The problem which has arisen in recent years is one that is born of the success of such people. Once Resources Centres had proved their worth, similar centres began to be established in schools, without that ground work being carried out by the school staff. Therefore, one has a situation in which a Centre is being developed and has to be staffed without the advantage of organic growth. Thus it is necessary for those establishing such Centres to look carefully at the roles which must be played within the staff structure.

It does not appear to be possible to set out any fixed pattern of staffing for a Resources Centre since this will depend on so many factors. An obvious conditioning factor is the size of the Centre and the number of people within the establishment which it is to serve. The nature of the teaching and learning within the school is perhaps a more crucial factor than is normally recognised. If a school wishes to retain formal teaching either wholly or in a large part, the Centre will require more academic staff, since it will undertake the role of a support service to those teachers who themselves will not have sufficient non-teaching time to become involved in the running of the Centre and the developing of materials. At the other end of the scale the school which commits

itself heavily to resource-based learning and team teaching is likely to be able to run its Centre with a small administrative and teaching staff and the emphasis placed on the technician and support staff. This particular approach involves teachers, as a normal part of their work, in the operation of the Centre and creation of media. This should not be thought of as a simple solution to the problem of starting a Centre since it requires major changes within the rest of the school and creates just as many problems as any other approach.

Before arriving at any conclusions about the staffing of a Centre it should be useful to look at some of the alternative solutions that have been developed in the United Kingdom.

The Inner London Education Authority through its Learning Resources Inspectorate, under the direction of Mr. Leslie Ryder, has developed the post of Media Resources Officer. This is a well publicised and well tried solution. A description of the work of such officers appears in appendix A.It is important to note that not all of the London schools have chosen to accept this particular way of working and it is certainly not forced upon any Headteacher.

The Media Resources Officers have a very broad based training and are accepted within a school as members of the teaching staff, not as technicians. They act as an inter-face between the requirements of the teacher and the hardware and software of Educational Technology. Together with technical and secretarial support, they provide the teachers within a school with organisation, control mechanisms, the creation of materials, maintenance and, above all, friendly and co-operative guidance. The work of an MRO within a London school cannot be considered in isolation from the method of finance control operated in this area. One cannot consider the staff without considering the resources with which they work. The Inner London Education Authority has a scheme known as the Alternative Use of Resources. Under this scheme all the members of staff within a school have the opportunity to decide, democratically, the way in which the money available to that school should be deployed. This does not include the normal salaries of teaching staff but can include what would normally be considered to be departmental monies. If one department wishes to spend more money than would normally be available on some particular item or activity then this can be done with the co-operation and agreement of the other members of staff. The way in which this affects staff, and therefore its relevance to this particular examination, is that the staff within a school are at liberty to use that money to buy more teaching staff, or more support staff, should this be seen as valid.

This is a very peculiar approach to the staffing of resources centres and requires the support of all the members of staff within a school. However, the ILEA is in an advantageous position since it has many schools in a small area. As a single authority it can take advantage of the economies of scale and train and organise its MROs. It is not yet certain whether or not such a scheme can be operated successfully within an Education Authority whose population is more widely spread. One of the elements in the success of this particular approach to staffing rests on the acceptance of the specialist personnel as being on a par with the teaching staff. Other educational areas in other countries have organised structures and levels of professional recognition which militate against the acceptance of such a scale.

Much has been written about those schools which have adopted a radical approach to resource based learning, such as Countersthorpe, Codsall and the Abraham Moss Centre, and it is not the intention of this book to repeat such well documented instances. It is worthy of note that the organisation of staff in each case has arisen out of specific, local, needs of education. The choice of a particular approach to the curriculum, a new attitude to the processes of learning has resulted in new strategies of staffing.

The choice of team teaching and resource based learning implies the production of learning materials and this implies people. If teaching staff are to be required to make such materials without support staff then questions can be raised about the cost efficienty of spending more money to increase the staff.

Is it wise for a trained teacher to spend valuable time typing badly when the work could be done in a fraction of the time by a trained typist? At the same time the teacher would be free to return to teaching duties, giving double gain.

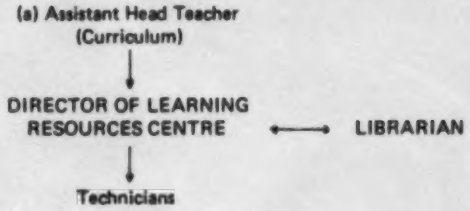
The difficulty always, is to convince those who control the finances that greater gains can be achieved in this way by placing staff effort where it can be most effective.

Such an argument can be used to show the effectiveness of secretarial staff, auxiliaries to operate reprography equipment, even to employ a graphic artist within a large school. The savings can be demonstrated easily and the quality of the materials should be higher.

Education has put up with highly paid two finger typists and Banda operators for many a long year. There are many racehorses pulling milk-carts.

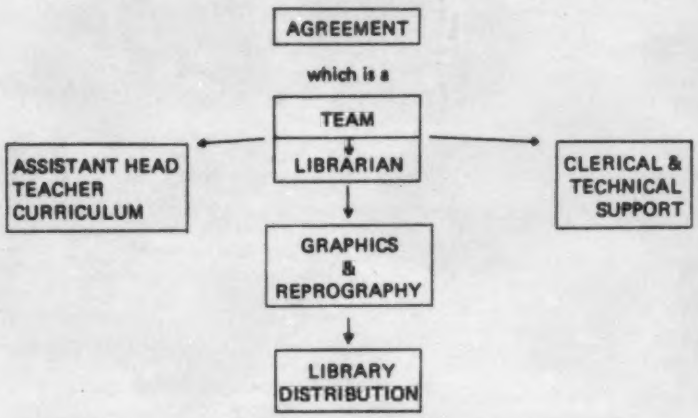
A recent conference of educationists in Scotland suggested that the role of the MRO could be divided amongst a team of people – most of whom already exist within the school system.

For the secondary school the following were offered:



It was here suggested that the A.H.T. should have additional management training and that the directors of the Centre – at Principal Teacher level or above should have a diploma in Educational Technology.

(b) MRO is replaced by an



For the Primary School the Conference found that the best solution was to place the Resources Centre under the direction of the AHT and add auxiliary staff. It was recognised that there would be a continued need for support and co-operation from the local Authority and other schools.

Each of these solutions places the administrative control in the hands of the AHT (Curriculum). Assuming the necessary training is available then this places the control of resource development and provision solidly alongside the development of the curriculum; a shared place for which many have argued for a long time.

The question as to whether or not there should be a person designated to run the Centre itself has still to be resolved. In many ways this will be a management function since the educational planning and control will be in the hands of the AHT. There is a place within such a team for both the educational technologist and the librarian. Both have to depend on the skill of the other, yet neither should be expected to do the other's job. There is therefore no real conflict between them since they are interdependant and neither will attempt to tell the other how to do his or her job. Once the Centre is established and the management post is clearly recognised there should be no obstacle either to the educationist or to the librarian undertaking this role.

The problem of staffing a Resource Centre appears therefore to depend upon:

The creation of the best possible team from the people available.

The active co-operation of all other members of staff.

The appointment of as many of the appropriate auxiliaries, technicians and specialists as is possible to make the greatest use of the skills of the human beings who are themselves perhaps the most valuable of all the resources in a Resources Centre.

Appendices

A. The role of the media resources officer.

B. A recommendation for the establishment of a school Library/Resources Centre.

C. The Librarian in the resources centre. By W. Paton.

D. Questions.

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APPENDIX A

The following is an interview conducted by the Author and Dr Gaye Manwaring. It is reprinted by the kind permission of The SCOTTISH EDUCATIONAL JOURNAL.

HOW A MEDIA RESOURCE OFFICER CAN HELP OUT

Two Media resource officers from London schools recently visited Scotland. They are Jill Wise and Madeleine Long. At the end of their visit they spoke about their work. Their views are personal and not necessarily the policy of the Inner London Education Authority.

Their answers are joint responses or are preceeded by the initials of the officer speaking. We began by asking them:

What are the duties of a media resource officer?

Our official job description covers five areas of job activity: within our establishment we organise and co-ordinate A/V facilities; create and produce A/V materials such as tapes slides, transparencies etc.; advise staff on resources; train staff in the use of equipment and simple preparation of materials; and co-operate with the librarian to develop a library/resources centre where possible.

What would an ideal training course include?

An ideal course would include training in skills such as graphics, photography, reprography, etc. This initial course should also include a detailed study of the "management" side of our job, including such things as organisation, storage, retrieval and cataloguing, budgeting. It should also give opportunities to study other resource centres in theory and practice. There should be complete modules on psychology of learning and educational theories. After appointment to an establishment there should be no day-release training but advanced short courses on a modular basis, so that MROs might spend some time each year exploring selected techniques or other areas in depth.

ASSESSMENTS

What was your course of training?

Three months block release course at a Technical College at the start of our appointment, studying basic skills, educational theory, and briefly some "management" problems. After appointment to an establishment there was a further year of day-release study. Confirmation of appointment as an MRO comes after this first fifteen months, when an assessment is based on five areas of work in each of which a pass must be obtained. These areas are: two written examinations (one a practical skills and one on management and learning theory), two projects, course-work, headmaster's report, and job inspection by the Learning Resources Inspectorate. A failure in any of these areas means that the essential qualification "The Certificate in Media Resources" is not granted.

How do staff treat you – as an academic teacher or as a lab technician?

ML. They treat me as a specialist in A/V resources, without expecting me to be either a technician or a teacher.

JW. I agree with Madeleine, although in fact my staff know I was a teacher before being an MRO. In terms of status I am accepted as a professional member of the staff.

Who decides on the medium for a given resource?

ML. This is usually worked out in discussion with the teacher. The original ideas come from the teacher, but I do try to make them aware of such practical considerations as budget, production time, availability of resources, appropriate equipment, etc.

JW. I usually suggest the medium based on the information the teacher gives me, unless they already know just what they want.

How much of your total resource collection was produced in-house?

ML. About 50 per cent – an unusually high percentage, but this is one advantage of working in a primary school.

JW. About 30 per cent.

How much of your time is spent creating materials?

ML. Roughly two-thirds of my time is spent in creative work.

JW. About one-third for me. It is less than Madeleine's probably because of the difference in size between the two schools – as mine has 1,000 pupils and a staff about 60, I spend proportionately more of my time on management and organisation.

What if you need the specialist help of a graphic artist?

Our training is sufficient to cope with normal demands on the art work side, remembering that we are mainly creating for use in our own establishment and are not involved in semi-commercial production.

How much are your educational ideals thwarted by local constraints?

ML. Not too much – the most constraining factors for me are usually the practical ones – size of rooms, lack of time and/or space, availability of power points.

JW. I agree – I should like to see the children using A/V resources much more for reference and enquiry, but I am limited by space in my room.

How much PR work do you do in the school and how is this done?

ML. At first a lot of PR work was necessary, as it takes quite a time to become established. This is mostly on a personal basis – having coffee and lunch breaks with the staff, for instance. This is enormously useful as well as pleasurable. When I arrived I sent out a handout "What is an MRO", and a "Guide to Media Resources at Munster School", which I compiled after two terms. These are also useful to new staff. As a communication between myself and the staff, we have a Library Resources Centre message book, which lets everyone know what is going on.

JW. Similarly, a lot of my PR work is on a personal basis, I also distributed a handout when I arrived, and shortly after a Resources Handbook which goes to every department and which is continually being updated. I also have two display boards in the staffroom which advertises materials, visits, courses, and I am always given a chance to talk to new staff and students when they first arrive.

To whom are you responsible?

Primarily to the Headmaster. Professionally we work under the guidance of the Inspector for Learning Resources, Mr. Leslie Ryder, and his two organisers, and administratively we are responsible to the Establishment Officer at the County Hall.

Who pays for materials, the individual department or the resource centre?

ML. My annual budget pays for all consumable software used by myself and the staff, most non-consumable software (e.g. hire of films), and all the smaller items of hardware for the Library Resources Centre and throughout the school.

JW. The departments pay for the materials to carry out work they request – either by supplying them themselves or by my debiting their departmental allowance. Materials for media of a general or reference nature are usually paid by the Library/Resource Centre.

How is the Resources Centre catered for in the school budget?

ML. Large items of hardware (e.g. electronic stencil cutter) come out of the Alternative Use of Resources budget, and hardware bought specifically for a purpose i.e. to equip the Maths Workshop, Reading Workshops, etc. is provided by that budget. That is as far as the Department system goes in a primary school.

JW. Our Alternative Use of Resources allowance (money for the school to spend as it chooses) is allocated by a committee, of which I am a member. All our departmental allowances (including mine) come from this source, as do any large

items of hardware which I might suggest to the committee and have approved by them.

What back-up services are available to you?

We have seven basic back-up services:—

(i) Department of Electrical and Mechanical Services: the repair department for most of the AVA equipment.

(ii) The Equipment Centre, which provides all the furniture and furnishings for schools, and where the ILEA Film Library is housed (a free service to ILEA schools). The advisory Panel for Learning Resources which is chaired by the Staff Inspectorate, meets here and there is also a permanent display of resources which the panel has recommended for use in ILEA schools.

(iii) Media Resources Centre.
This is continually building up a library of commercially produced material, which can be viewed listened to and evaluated by staff and MROs at any time. It does not, however, provide a lending service. It is designed for teachers/MROs/Librarians considering buying software.
The Centre also produces its own software — with the specific intent of catering for the needs of London children, filling the gaps left by commercial resources.
It also liaises with the Educational TV Centre and Radio London in producing material for broadcasts.

(iv) Educational TV Centre.
Staffed by qualified technical staff and seconded teachers as producers and directors, this is the largest closed circuit educational TV service in the world. It aims to fill the gaps left by the BBC and ITV, and every establishment in ILEA can plug into its landline.

(v) Library Service.
Provides librarians with help and advice where necessary in running Library Resource Centre, also loan collections of books for schools.

(vi) Learning Resources Inspectorate.
This is the central "office" of the MRO's. It provides help and advice in setting up Resources Centres, some research into new hardware, a PR service for the MROs, and a link with the rest of the ILEA. Also based here is the Resources Support Group, a mobile unit of ten people consisting of MROs, Librarians, Technicians etc., who help set up Resources Centres. It is also responsible for in-service training of teachers and helps to guide policy of Authority production services.

(vii) Teachers' Centres.
One in each of the ten divisions of ILEA, each staffed by a team of ex-teachers, clerical staff and an MRO. They provide specialist equipment, run courses and act as central information bank for the schools in their division. The Teachers' Centre MRO also holds termly divisional meetings for its MROs, to keep them in touch with one another, and with the "outside" world.

How does a school go about "getting" an MRO?

The school is inspected by the Staff Inspector for Learning Resources and the Media Resources Organisers. Depending on the size of the school plant, resources available, suitability of accommodation, and the genuine interest in resources shown by the school, the Inspectorate recommends the establishing of an MRO post to the Establishment Officer. A list of established vacancies is circulated three times a year, and any MRO, whether at the end of the initial three months training or already experienced, is free to apply. The school does not pay for an MRO out of its capitation if the post is an established one.

What benefits have come from MROs for pupils, teachers, the school and the community?

ML. For the pupils the MRO can bring to the children an understanding and experience of the world outside the classroom that they might otherwise never be able to enjoy. Life becomes ever more sophisticated — many of our children have constant access to television, cassette and tape recorders, movie cameras

and the like, and so the world of the classroom must keep pace and be made more interesting in order to introduce the children to the pleasure of learning.

For the staff, an MRO can provide one of the most important resources of all – time: time to concentrate on slower children while the faster ones are involved in a tape or television programme, time to concentrate on their teaching instead of worrying about the reliability of the equipment and the production of material.

The MRO is also particularly valuable when the turnover of staff is high, so providing a continuity of planning and organisation, and a stability in the school which is of benefit to the children, the staff, and to the school as a whole.

JW. I should like to emphasise what Madeleine has said about the time we are able to give to resources development and organisation, for no matter how keen or knowledgeable the teachers may be, they are inevitably restricted by their many other commitments. In my school we now have a clerical assistant and an AV technician helping me in the Resources Centre, and so the staff have no worries about getting work prepared, recordings done, equipment set up. All they have to do is ask.

FACT SHEET

MUNSTER PRIMARY SCHOOL,
Fulham, London SW6 SAS

450 children aged 4 to 11
20 teaching staff (including 2 part-timers)
2 teachers with posts of responsibility for AVA

AVA EQUIPMENT

Library Resource Centre

3 cassette tape recorders
3 open spool tape recorders
1 Audio page machine (record) + 2 headphones
1 slide/strip projector
6 slide viewers
3 loop projectors
1 35mm slide projector + synchroniser unit
1 overhead projector
1 audio loop + 6 headphones
2 radio cassette players
1 mains radio
1 light box
3 record players
various screens

Reprographic/Photographic Workshop

1 electric spirit duplicator
1 electric ink duplicator
1 Dry Photo copier
1 Thermal copier
1 electronic stencil cutter
1 SLR camera
1 copying stand + lights
2 Photfloods lights on stands
1 tripod
6 Instamatic cameras
1 Instamatic copying stand

Viewing Theatre

1 VTR machine ½"
1 TV monitor
16mm projector
8mm projector
1 slide/strip projector
1 rotary magazine slide projector
1 long throw lens

Around School

2 cassette tape recorders
2 Language Masters
3 open spool tape recorders
2 overhead projectors
3 portable TVs
4 TV monitors
3 transistor radios
2 record players
1 audio page playback machine
various screens

Reading Workshop

1 Language Master
1 audio page playback machine + 2 headphones
1 cassette machine
1 audio loop + 6 headphones

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BROOKE HOUSE SCHOOL

CLAPTON, LONDON, E.5

The following is a reprint from a booklet for visitors produced by the Librarian and Media Resources Officer, describing the work of the Library/Resources Centre.

THE LIBRARY AND RESOURCES CENTRE

The Library and Resources Centre, which have recently been refurnished, are situated on the second floor of the main building. The library provides a loan and reference collection of a wide variety of books and is also used for teaching purposes. The Resources Centre serves as a preparation room and base of equipment and media. Elsewhere, there are a technician's workroom, darkroom, and Lecture Theatre for large group viewing.

The Library has a stock of 14,000 books and other media reflecting the interests of both pupils and staff. The library is arranged in Dewey order and all stock, both books and other media, are entered in one catalogue situated by the main door.

Pupils each have two library tickets issued to them during their first week, but more tickets may be had on request. Books are issued for two weeks but may be renewed if necessary. Because of the limited space pupils are restricted to using the library on a house basis at break and lunch times; after school all pupils are welcome. No restriction is put on staff borrowing books.

The Resources Centre exists to facilitate the use of audio-visual media within the school. In order to achieve this aim, four main areas are being developed; the efficient use of audio-visual equipment; training staff in its use; production of teaching materials; and collecting a "bank" of software.

Equipment

We have a good variety of A-V equipment, which is available for staff to use according to their requirements. The range includes: 16mm sound projectors; 35mm filmstrip/slide projectors; 8mm cameras and projectors; video-tape recorders for recording TV programmes; cassette and open-spool tape recorders; record players; language teaching machines; and a variety of copying and duplicating machines.

Staff training

Formal courses are run on the use of 16mm projectors (for the I.L.E.A. projection certificate). Also, informal group and individual instruction is given according to demand.

Production of teaching materials

Staff are encouraged to produce their own material if they wish, but often particular skills are required or time is not available so the centre produces material to suit staff requirements.

Examples of the range of work are:

Reproductions of maps and diagrams for handouts.
Typing and duplicating of work sheets.
Transparencies for the overhead projector.
35mm slides from illustrations.
Recordings of radio and TV programmes.
Production of booklets, study packs, charts etc.

Collection of software

The M.R.O. and Librarian work together to build up a collection of audio-visual material as a supplement to the traditional book material in the library. These items may be used during lessons, or for reference by staff and students.

The collection includes both commercially and school produced items, such as: Charts, study prints and packs; OHP transparencies; slides and filmstrips; records and tapes; TV and radio programmes; also catalogues of films and other media; and copies of all stored stencils.

APPENDIX B

The following recommendations were produced by a Working Party set up by the former Renfrewshire Education Department.

They are presented simply as one possible solution.

LIBRARY/RESOURCE CENTRES

A WORKING GROUP consisting of a Depute Director of Education, subject advisers, and librarians was appointed to produce a pilot brief identifying ideal accommodation for a library/resource service for secondary schools with rolls of 1,000—1,400.

BASIC PRINCIPLES were established as follows:

(a) The resource centre exists mainly to service the curricular work of the school, in two quite different situations:
  (i) in support of class teaching (i.e. supplying material mainly for use by teachers); and
  (ii) in providing for individualised and group learning (i.e. supplying pupils' material).

(b) Nevertheless, the general and recreational reading service, including lending for home reading, should continue, and consequently an informal lending and lounge area should be provided.

(c) Facilities for individualised and group studies should be within the same general area as the book and resource materials.

(d) A typist from the administrative typing group should be based on the resource centre complex to type assignment cards, work-sheets and other curricular material.

(e) The librarian's office and workroom, together with the typing area should be housed in the same room, which should be closely associated with the resource centre's reception and control area.

(f) There should be a graphics studio and machine room for reprographic work.

(g) A learning laboratory, live recording studio, off-air radio and T.V. recording room and an audio-visual workshop should form part of the complex but do not require absolute physical integration with the resource centre.

(h) The learning laboratory would be available for use by any department.

(j) The A/V workshop would be the school's centre for maintenance of equipment and for distribution of hardware and of video and sound recordings to classes.

AREAS. For schools with 1,000—1,400 rolls, suitable areas would be:

Function	*Square Metres*
Library, resources, tutorial, reception and control	240
Learning, laboratory, live recording studio, off-air recording studio, A/V Workshop and store.	120
General office, typing, library processing and store.	30
Reprographics.	10
Graphics.	15
Total	415

STAFFING. The Assistant Head Teacher Curriculum would have overall responsibility for the services provided by the resource department and the use made of them.

The Librarian would be responsible to the A.H.T. Curriculum for the management and operation of all except the technical services.

Staff required:

Library/Resource Department

1 Professionally qualified librarian.
1 Graphics technician.
1 Typist (from existing administrative typing staff).
2 Library Auxiliaries.

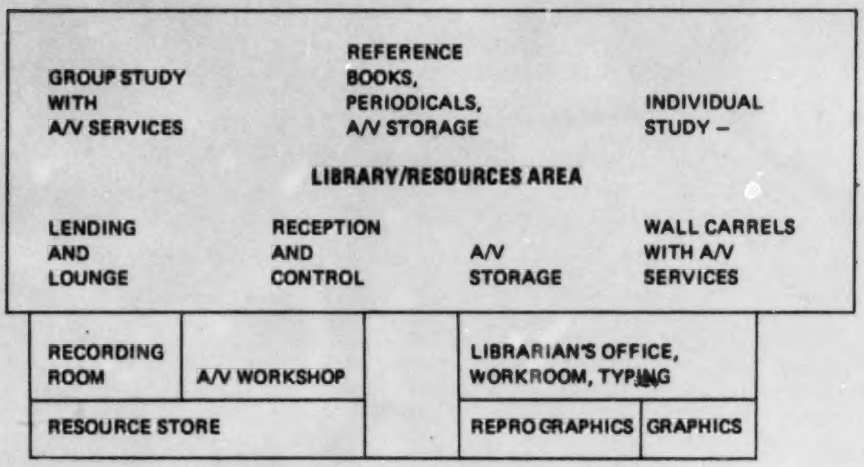
Learning laboratory & technical services

2 A/V technicians (from existing technical staff).

COMMITTEE. A Resources Centre Committee should be appointed in each school under the Chairmanship of the Headmaster or Assistant Head Teacher (Curriculum). The day-to-day operation of the service would, of course, be the responsibility of the librarian, who would automatically be a member of the Committee.

The Committee would, within the policy devised by the Headmaster, consider the need for resource services and the function of the resource centre. It would plan the organisation of the centre, encourage its widest use and monitor its effectiveness. Allocation of the library grant would be a matter for the Committee.

RENFREW COUNTY RESOURCE CENTRE "IDEAL" LAYOUT



APPENDIX C

THE LIBRARIAN IN THE RESOURCES CENTRE

M.W. PATON

Some recent educational trends have had a traumatic effect on the traditional work of the school library.

The development of the comprehensive school with a wide-ranging curriculum and heterogeneous classes has required some breakdown of classes into ability groups. This in turn has increased the use of self-learning methods, so that groups or individuals can work and make progress independently.

Developments in educational technology have also had repercussions on school libraries. The sheer range, cost and quantity of the Audio Visual equipment and software requires that a school's holding be kept centrally and organised systematically so that every teacher may be aware of all that is available on each topic and may be supplied with the media he requires as easily and quickly as possible.

The concurrence of these developments in technology and self-learning techniques has produced a further development in methodology, that of resource-based learning. This in turn has such widespread repercussions on the work of teachers that they need as much support and assistance as can be given them in matters such as the production, management, storage and retrieval of the materials of information. The immediate effect of these developments has been to increase the range and complexity of the stock of libraries so that they now encompass many forms of information media available:

(a) as individual units, such as slide sets, tapes, etc.
(b) in permanent structured kit form, produced commercially or by teachers on the advisory staff, Curriculum Development Centres etc., and
(c) in "ad hoc" multi-media packages assembled for a special purpose.

This in turn complicates procedures for selecting, ordering, indexing, storing and disseminating materials.

A further and more fundamental effect has been an enlargement of the traditional purpose of the library, creating especially a closer link between it and the curricular work of the school.

In short, the school library has become a resources centre, continuing to offer the reading services previously associated with the library, and also providing the school with the learning materials and information required, on two clearly identifiable levels:

(a) offering support and enrichment to teachers in a class teaching situation, and
(b) providing materials for pupils working individually or in groups in structured resource-based learning situations.

The resources centre is, therefore, an essential educational factor in the school, and it will fail in its purpose unless the teaching staff are actively involved in its planning, operation and use. At the same time the organisation and efficient operation of the service require a wide range of specialist skills which are additional to those of a teacher. One group of these skills is associated with the management and exploitation of recorded information, e.g.

(a) the organisation of media, in terms of ordering, classifying, storage and indexing, so that information on a given subject or theme can readily be identified and retrieved.
(b) awareness of the availability of sources of information and the suitability of certain sources for particular purposes.
(c) the organising of lending systems.
(d) providing information on available sources, by personal advice, by creating lists on a subject or theme, and by mounting displays.
(e) extending the scope of the resources service by liaising with other information services.

These are basically the skills of librarians. Librarians have had the reputation in some quarters of being concerned only with books but this is not the case; their field is recorded knowledge whatever the vehicle and their training equips them to deal with all forms of information media.

Librarians have also been blamed in the past – and sometimes deservedly – for thoughtlessly applying public library attitudes and methods to school situations. They are, however, trained to operate in different contexts and to provide for differing needs – for those of children and adults, of students, industrialists, teachers and research workers. Any librarian worthy of the name working in an educational library will wish to know the purpose of his work and will co-operate closely with teaching colleagues to provide services tailor-made for the needs of his clientelle.

The effective operation of the resource centre requires other skills, connected with

(a) graphics and design, for the attractive layout of learning materials.
(b) reprography, for reproducing learning materials, assignment sheets, etc.
(c) the maintenance of equipment in good working order.
(d) distributing and setting up equipment for use by teachers.
(e) advising on the use of equipment.
(f) typing and clerical skills, for typing course material, catalogue and indexing entries.
(g) routine library expertise, such as processing and issuing materials.

Although it is unlikely that every resources centre will have technicians possessing all these skills, there is no doubt that suitably trained technical, clerical and library assistance is required, especially for those centres which are servicing resource-based learning on a substantial scale. Part-time courses which have been available for a number of years cater for most of these skills, and some institutions are now offering courses involving a combination of these for teachers or librarians who wish to add a further dimension to their professional expertise, and for others who wish to train as A/V technicians.

The staffing picture is therefore of a team of specialists – teachers, librarians, technicians and clerical workers – all applying their varying skills towards the effective operation and use of the resources centre. If such a venture is to succeed, every member of the team must have a clear awareness of its objectives and of his part in achieving these objectives. In other words, there must be a clear policy for the resources centre and a formal means of exercising control.

The ultimate responsibility for the centre is, of course, the Headmaster's. The centre will reflect his philosophy, and he will define its objectives within the larger organisation of the school. It is probable, however, that he will wish to allocate responsibility for it to one of his staff and, considering the embracive role of the centre, the Assistant Head Teacher, Curriculum, would appear to be the person best suited to assume this responsibility.

To assist the A.H.T. Curriculum and to ensure the involvement of all departments, it is desirable that a committee be formed of teachers and the librarian. The committee would consider the function and development of the resources centre and would attempt to assess its effectiveness. It would maintain budgetary control and do everything possible to stimulate use of the centre.

The committee would, of course, also be concerned with the functions of the various staff involved with the resources centre and with their relationship to each other, especially where functions inter-lock and overlap. The functions of the technical staff should present no problems, but the roles of the teachers and librarian within the centre can be interpreted in many ways.

It goes without saying that the librarian and teaching staff must work closely together. They should be seen as having different roles but the same ultimate purpose.

They should work together in the selection of material, ensuring that each subject is adequately represented, catering for all age-groups and intelligence levels, and ensuring a balance between books and non-book media, and between curricular and non-curricular materials.

They should work together in assisting pupils to use the centre, in recommending sources and generally in ensuring that the centre is used to maximum advantage in terms of voluntary use and of formal curricular support.

In the preparation of learning materials, which is essentially a teacher's function, the librarian will be able to assist by providing sources and references, and by arranging for the necessary clerical and reprographic work.

By contrast, the teaching staff alone are responsible for the educational function of the centre. The use made of learning materials in connection with curricular work, the planning, structuring and restructuring of learning situations and the assessment of results are matters for teachers. Similarly discipline, especially where a full class is concerned, is a matter for the teaching staff.

On the same basis, the organisation and operation of the centre are matters for the librarian. Cataloguing, classification and lending procedures are the concern of the librarians, and it is perhaps worth mentioning again that the organisation and retrieval of information – no matter its form – are the basic skills of librarianship. The librarian is also equipped to extend the scope of the centre by liaising with other similar organisations and arranging interlending of materials.

A multi-media resources centre is a vital element in a modern school. It is also a complex organisation in its function, its range of stock and its staffing, involving as this does a wide range of skills not previously brought together. There have been cases in the past where pride or prejudice at professional level have prevented the resources centre from fulfilling its purpose. Happily there are now more and more instances where teachers and librarians are working together, each respecting the professionalism of the other and both committed to achieving a common objective. Theirs are the resources centres which achieve full potential.

APPENDIX D

The following questions might be considered by those planning to set up a Resources Centre.

Hardware

Purchase

- How are decisions taken in your school on the purchase of equipment?
- Do you have access to a wide range of information on the equipment which is available on the market and to the technical reports on that equipment?
- Have you drawn up a list of criteria by which you will select equipment?
  For example;
  - What curriculum needs dictate the type of software to be used and therefore the type of hardware?
  - Who is going to use the equipment?
  - Where is it going to be used; in a large or small room or area?
  - Does it have to be carried?
  - Is it necessary that this item of equipment fits a larger systematic development of equipment within the school and should it therefore be compatible?
  - How much money do you have?
- How much do you depend upon local suppliers for equipment and can they supply the items which you really want?
- Is there a policy for purchase set down by the Education Authority and does this coincide with your needs?
- When purchasing equipment have you considered that your policy, if successful, will result in greater use of hardware and software? Have you therefore allowed in your budget sufficient money for recurrent expenditure on spare lamps, repairs and replacements?
- Because of the increased use of machines that you are going to stimulate can you arrange to write off equipment over a shorter period of time than at present?
- Alternatively is it more cost effective to purchase higher quality equipment to start with and have a longer period of use before replacing it?

Hardware

Maintenance

- Do you have a school technician who can maintain the equipment?
- Is the equipment which you are contemplating buying easy to maintain?
- If you do not have adequate maintenance within the school, can you enter into a satisfactory maintenance contract with a local supplier?
- Have you checked on the equipment maintenance service of the local authority?
- Have you budgeted for the costs of maintenance in your long term planning?

Hardware

Distribution

- Should equipment be held centrally within the school? If so, can it be distributed with ease to the points within the school at which it is required?
- If the layout of the school does not allow for easy distribution of hardware how should it be held;
  (a) by department?
  (b) by floor or corridor?
- Is it desirable to have a central record of all equipment?
- Can you afford a central holding of basic equipment to replace departmental machines which need repair?
- What items of equipment is it most cost effective to hold centrally?
  e.g. reprographic equipment
  cameras
- Is it desirable to set up a specific unit for reprography to service the whole school?

Software

- Do you know what software is already held within the school?
- Is it desirable to have all the available software stored and catalogued centrally?

- If it is, how closely would you wish to have this catalogue integrated with the existing library facilities?
- Should items which are used regularly be catalogued centrally and then returned to the department from which they came?
- What method of cataloguing is best suited for your collection?
- Do you have access to sources of information on commercially available material?
- If commercially produced material does not satisfy your curriculum needs have you any methods of producing your own material?
- If you are setting out to produce your own materials what courses are available through which the staff can gain the skills necessary to produce those materials?
- Is there any way in which you can discover what materials have been produced by neighbouring institutions?
- What strategies will be necessary to involve other members of staff in the production of materials?

Staffing

- Does the success of your resources centre depend on the enthusiasm of a few teachers? What will happen if they leave the school?
- What steps can you take to ensure that the philosophy that underlies your resources centre is shared by the whole of the staff?
- Is there a technician service provided by the local authority, and how will such a service – or the lack of it – affect the developments within your school?
- What effect will the provision of a resources centre have on the school time-table?
- What proportion of the pupils' time will be spent in the resources centre?
- What sort of organisational structure do you think is necessary for your centre?
- Where do Librarians, technicians and auxiliaries fit into this structure?
- How much does it really cost for each member of your staff to produce learning materials, and would it be cheaper to employ somebody specifically for this purpose?
- When considering the allocation of specific duties to members of staff have you considered fully the implications in terms of equipment and materials which will be necessary for them to do their jobs?

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